



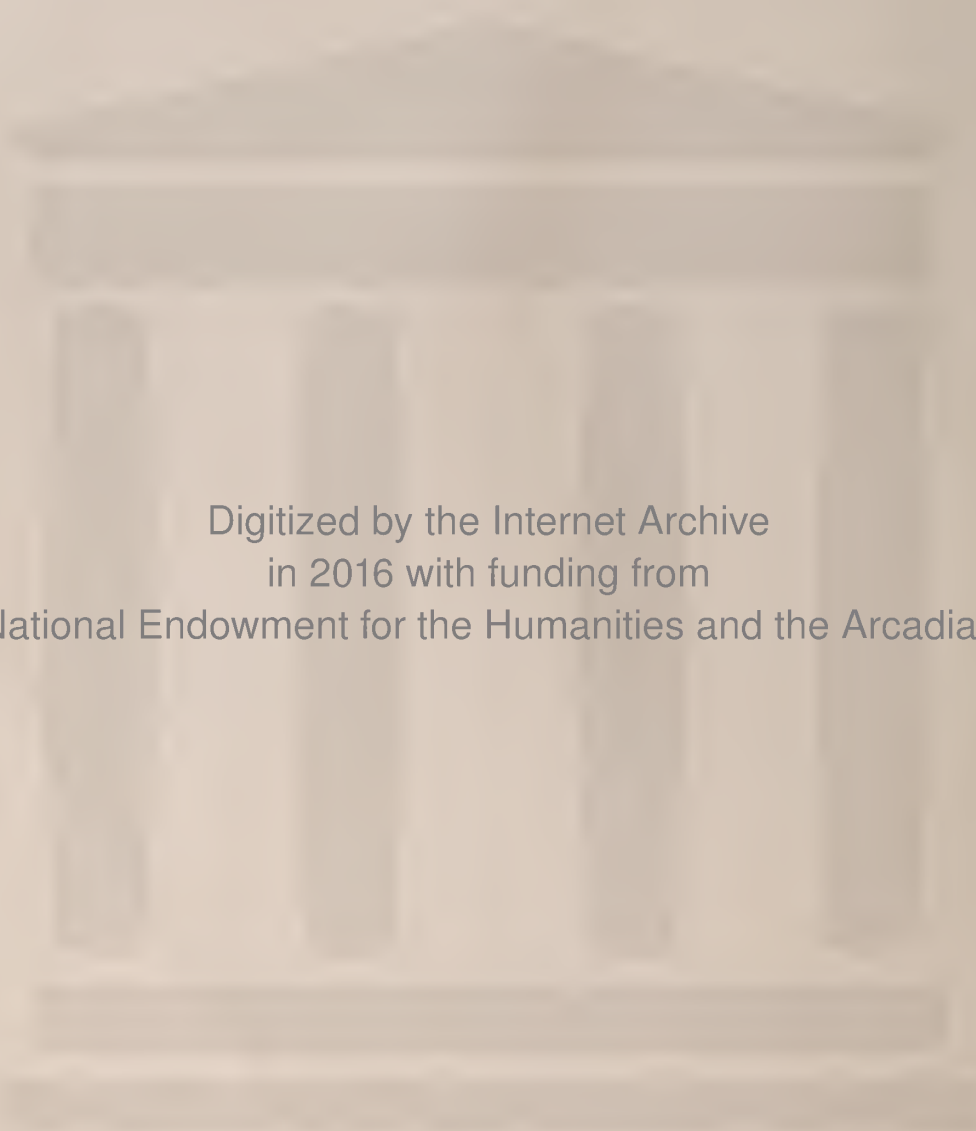


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# The Nebraska State Medical Journal



January, 1965

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*vol. 50 #1*

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<sup>\*</sup>Roseman, E.: *Neurology* 11:912, 1961.

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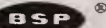
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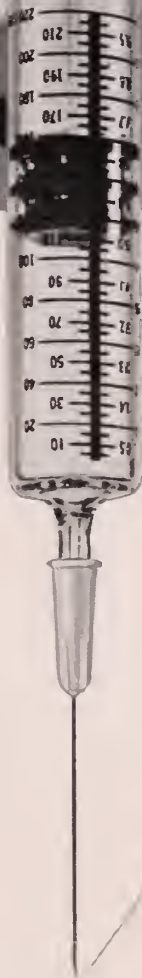
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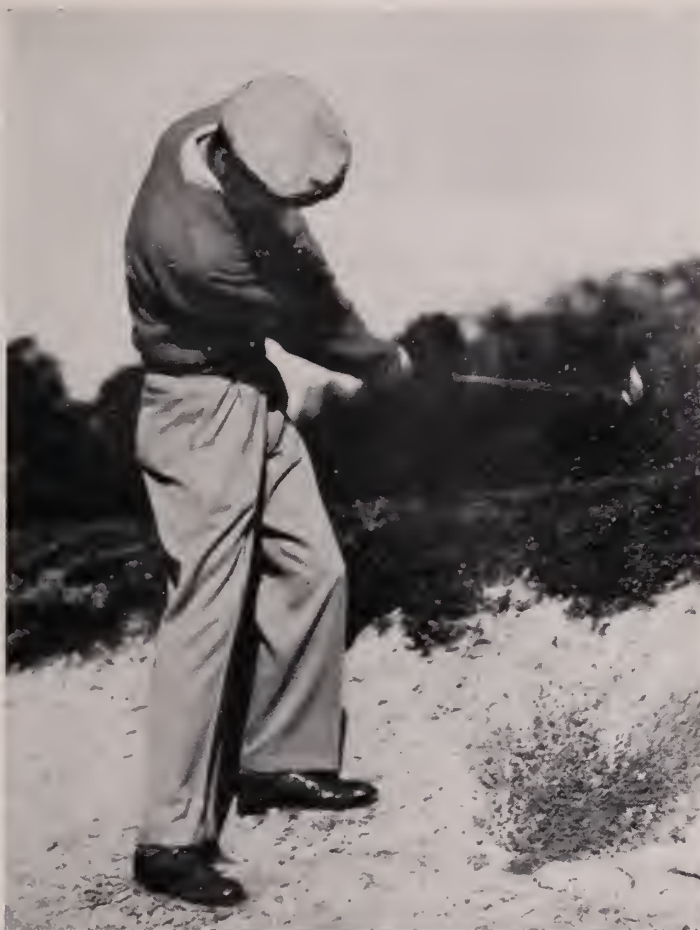
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## Current Comment

### The Physician's Task—

"When our medical ancestors founded this Society in 1848, each physician could carry in his own head the then accumulated medical knowledge, and in his bag most of the diagnostic and therapeutic armamentarium of that day, while hospitals were little more than places of last resort and forlorn hope. Today, we, their successors, must face not only the tasks of mastering a useful fraction of the vast accumulation of knowledge and of keeping up with advances, but also the problems of providing the benefits of that knowledge to all mankind.

"The solutions of those problems are becoming some of the big businesses of the world. We, as physicians, we as a society, have a major responsibility in seeing to it that these problems have business-like solutions by applying sound business methods, not by subjecting them to the buffetings of a political football.

"A business-like approach calls for three

chief measures: the control of expenses, that health money be wisely spent, and when needed; proper insurance, to fit the needs of each client, and based on sound actuarial principles; and full assurance by government of health services to those unable to provide it for themselves.

I call attention to the last named first, because it is the one most in the public eye and the target of immediate political aim." — Excerpt from address of The President Elect, Dr. Richard A. Kern, The Pennsylvania Medical Society; *The Pennsylvania Medical Journal*.

### Hearing by Electromagnetic Waves—

Findings which may prove useful in the diagnosis and treatment of hearing-problems indicate that there is some truth in claims of "hearing" meteors and jet planes traveling toward an observer at speeds faster than sound.

However, people do not hear these meteors

(Continued on page 10A)



## HOW TO BE SURE your young patients get the aspirin dosage you want them to have

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#### Hearing by Electromagnetic Waves—

(Continued from page 8-A)

or jets with their ears in the usual sense, says Dr. Clyde E. Ingalls of Cornell University.

Speaking before the Acoustical Society of America meeting in Austin, Dr. Ingalls explained that this kind of hearing is a sound sensation produced by electromagnetic waves traveling at the fastest speed known to science — the speed of light — and registering directly on the listener's brain or nerves near the brain.

Investigations made with electromagnetic waves from a radar system showed that persons standing in the edge of the radar beam could hear a sound like that of a bee buzzing in a window. When a square of window screen was placed between the test subjects and the beam, the subjects could not hear it nor were they able to hear it if they put one ear through a hole in the screen.

Indication that the brain or surrounding nerves receive the electromagnetic waves directly was shown when subjects placed the hole on the screen over a point in the

center of their foreheads. This way they could hear the radar. —*Texas State Journal of Medicine*

#### Law Needed for Battered Child Reports—

The physician who treats an abused child is faced with a dilemma. If he reports the trauma to the police authorities, he risks a damage suit against him by the parents. The alternative is to overlook the probable cause of injury and avoid legal complications, possibly at the cost of the child's life. An editorial in *The Texas State Journal of Medicine* indicates the need of a law to protect the physician who makes such reports to the police, and thereby to indirectly protect the child. The legislation recommended is similar to that suggested by the Children's Bureau, US Department of Health, Education and Welfare. This suggested law makes the report of abused children mandatory and also gives the person making the report immunity from legal action.

A few states have adopted such laws,

(Continued on page 12-A)



**Of 507 patients with confirmed ear, nose and throat infections... 465 or 91.7% were treated successfully with Signemycin®**

**Note:**

Adams,\* whose 50 patients included 20 with ENT infections, stated that Signemycin "was particularly valuable in infections that did not respond to other antimicrobial agents, and in patients to whom penicillin could not be given." All his cases responded within five days; in most patients, all signs of infection disappeared in three days.

\*Adams, J.: J. Tenn. Med. Ass. 50:446, Nov., 1957.

| Condition                       | No. of Patients | No. Responded To Signemycin |
|---------------------------------|-----------------|-----------------------------|
| Otitis media                    | 90              | 86                          |
| Pharyngitis and laryngitis      | 162             | 148                         |
| Sinusitis                       | 68              | 55                          |
| Tonsillitis and peritonsillitis | 163             | 153                         |
| Various                         | 24              | 23                          |
| Totals                          | 507             | 465 (91.7%)                 |

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## Law Needed for Battered Child Reports—

(Continued from page 10-A)

among them Ohio which reports that its law is successful. Other states have had laws enforced for too short a time to give fair evaluation. The law will be valuable only if physicians abide by it.

An argument has been advanced that such legislation might make parents reluctant to seek medical care for abused children, for fear of being reported to the police. At the present time, in Texas, the most desirable action a physician can take is to call the police. The police then will investigate the matter and, if need be, file a petition based upon their investigation. The physician is often required to furnish a written report containing the facts upon which he bases his opinion. The physician can minimize his legal risk if he will remember a simple rule which states that he should never accuse. He must report only what he has observed and should not include personal suspicions in his report.

Rapid action on the part of the physician

is indicated when he suspects that a child is the victim of abuse. If not curbed, the abuse will often continue until the child is crippled or killed. Even if there is no legislation to protect the physician who wants to report such a situation, there is a normal obligation compelling the physician to report child abuse.

## Keeping Children Healthy—

Longview, and perhaps as many as six other Texas communities, will launch a pilot project this year to help parents supervise the health of their children from birth through age 18.

These efforts are expected to usher in an ambitious and worthy program titled "Keeping Children Healthy in Texas." Spearheaded by the 800,000-member Texas Congress of Parents and Teachers, the project has been endorsed by the Texas Medical Association and seven other state organizations concerned with children and their health.

(Continued on page 14-A)



Of 1,028 patients with confirmed respiratory infections...  
954 or 92.8% were treated successfully with Signemycin®

**Note:**

Hammerl\* selected his patients for treatment with Signemycin on the basis of demonstrated bacteriological resistance to other antibiotics or failure of previous therapy. Of 100 patients with various respiratory tract infections, 95 responded to Signemycin. Pathogens isolated included staphylococci and *Diplococcus pneumoniae*.

\*Hammerl, H.: Wien. Med. Wschr. 103:629, July 26, 1958.

| Condition                      | No. of Patients | No. Responded To Signemycin |
|--------------------------------|-----------------|-----------------------------|
| Abscess, pulmonary             | 17              | 16                          |
| Bronchiectasis                 | 19              | 13                          |
| Bronchitis                     | 286             | 267                         |
| Bronchopneumonia               | 192             | 179                         |
| Empyema                        | 12              | 11                          |
| Pneumonia, lobar               | 150             | 146                         |
| Pneumonia, other febrile       | 160             | 150                         |
| Various infected pneumopathies | 192             | 172                         |
| Totals                         | 1,028           | 954 (92.8%)                 |

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The wife is making out fine with her diet.  
Last week she disappeared completely.

## Keeping Children Healthy—

(Continued from page 12-A)

Goals of the program are (1) to increase parents' awareness of the importance and value (a) of having regular periodic medical and dental checkups for their children, (b) of carrying out the physician's and dentist's recommendations for treatment or correction of defects, and (c) of having children receive immunizations and boosters against diseases; (2) to encourage the early selection of family physicians and dentists; (3) to encourage parents to keep a permanent personal health record for each child in family; (4) to encourage the use of adequate school health records; (5) to support the improvement of health education programs in the community; (6) to increase parents' knowledge of the community's health resources and facilities; and (7) to provide a suitable questionnaire to assist parents in evaluating the health supervision of their children.

Organizations besides TMA and the Texas Congress of Parents and Teachers which are supporting the project are the Texas

State Department of Health, Texas Dental Association, Texas Education Agency, Texas School of Nurses Association, Texas Hospital Association, Texas Nurses Association, and Texas Association of School Administrators.

A state advisory committee has been formed including representatives of each of these groups and other consultants. It met several times in Austin during the past year, analyzing material available from national sources and tailoring this program to fit the specific needs of the people of Texas.

This project has involved a great deal of imagination, energy, and enthusiasm on the part of the PTA, and it is going to mean a lot of "leg-work" for the local parent-teacher groups; but Texas children should benefit from their efforts and our support. — *Texas State Journal of Medicine*

## Priorities for Review of Drug Effectiveness—

Thirteen categories of drugs have been selected in order of priority for review under the effectiveness provisions of the Kefauver-

(Continued on page 18-A)



**Of 5,057 patients with confirmed infections of all body systems... 4,731 or 93.5% were treated successfully with Signemycin®**

**Note:**

The high rate of response to Signemycin in these cases is noteworthy because the totals include many patients with difficult-to-treat infections, many whose infections had proved resistant to other agents, and many who had been treatment failures on other therapy.<sup>1-87</sup> In addition the following criteria were used for the cases cited: (1) only published results were used (2) results were confirmed by clinical and/or laboratory findings (3) patients were cured, not "improved" (4) dosage conformed with current recommendations in the United States (5) no other anti-infective agents were used concomitantly (6) no instance of prophylactic use was included in these tabulations.

| Condition                              | No. of Patients | No. Responded To Signemycin |
|----------------------------------------|-----------------|-----------------------------|
| Ear, nose and throat infections        | 507             | 465                         |
| Respiratory infections                 | 1,028           | 954                         |
| Gastrointestinal infections            | 425             | 387                         |
| Genitourinary infections               | 748             | 684                         |
| Skin and soft-tissue infections        | 1,088           | 1,036                       |
| Bone and joint infections              | 71              | 64                          |
| Deep-seated or generalized infections  | 257             | 251                         |
| Obstetrical & gynecological infections | 341             | 320                         |
| Miscellaneous conditions               | 592             | 570                         |
| <b>Totals</b>                          | <b>5,057</b>    | <b>4,731 (93.5%)</b>        |

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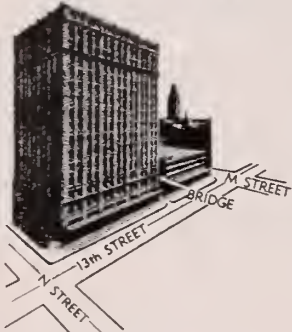
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### Priorities for Review of Drug Effectiveness— (Continued from page 14-A)

Harris Drug Amendments of 1962, Joseph F. Sadusk, MD, Medical Director of the Food and Drug Administration, Department of Health, Education and Welfare, has announced.

Dr. Sadusk said that the list covers many products which have been cleared, for safety only, between enactment of the Federal Food, Drug and Cosmetic Act of 1938 and passage of the Drug Amendments of 1962. The new amendments provided for a two-year grace period, recently expired, for manufacturers of these products to submit evidence of effectiveness as well as safety.

Dr. Sadusk noted that the Pharmaceutical Manufacturers Association and some of its member firms have filed suit in the Federal Court at Washington, Delaware, in an effort to establish that FDA does not have authority to require effectiveness reports for drugs cleared through the new drug procedures in previous years, but which industry now regards as "no longer new drugs."

"The results of that litigation may have a very important bearing on whether the FDA may apply these new effectiveness provisions to many drugs now on the market," Dr. Sadusk said. "At issue is the question of whether the drug manufacturer must offer substantial evidence that the drug he is marketing is effective for the purpose claimed in its labeling; or whether he is entitled to continue to market it unless FDA develops adequate evidence to assume the burden of proof in court that the drug is ineffective for the purposes claimed," he said.

Saying that the issue is of major concern to the medical profession as well as to the public generally and to drug manufacturers, Dr. Sadusk added that "The outcome will be of critical importance in determining whether the FDA can assure the effectiveness of the nation's drug supply."

He pointed out that the evaluation for effectiveness of drugs on the market before October, 1962, must be done whether it be on the basis of provisions of the new law

(Continued on page 20-A)



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## Priorities for Review of Drug Effectiveness—

(Continued from page 18-A)

or under the old law requiring case-by-case litigation in the courts. In either case, he said, years of effort may be required even with the fullest cooperation of the medical community and the pharmaceutical industry.

He listed the 13 categories of drugs in order of priority for the FDA's Bureau of Medicine to apply its initial review efforts as: (1) proteolytic enzymes (oral and injectable); (2) progestational agents; (3) drugs offered for anxiety and apprehensive states, most tranquilizers, monoamine oxidase inhibitors; (4) nonprescription iron preparations; (5) pediatric dosages; (6) topical ophthalmic antibiotic combinations; (7) a number of sustained-release drugs; (8) other topical antibiotic combination products; (9) bioflavonoids; (10) hormone creams; (11) drugs used in pregnancy; (12) topical antihistamines; and (13) topical caines (local anesthetics). — *The Pennsylvania Medical Journal*



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Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

### Side Effects

Constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, leukopenia, muscle cramps, nausea, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.

### Average Dosage

One tablet (100 mg.) daily with breakfast.

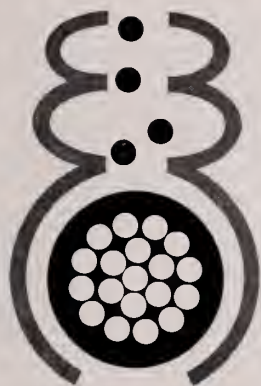
### Availability

Tablets of 100 mg. in bottles of 100 and 1000.

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(Warning: May be habit forming)  
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- lowers motility promptly
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Pending discovery of the cause, early cessation of diarrhea is almost always urgently indicated. Prompt symptomatic control averts distress, dehydration and, frequently, severe exhaustion.

Both experimental and clinical evidence indicates that Lomotil exerts such control efficiently, safely and with maximal promptness.

#### dosage:

The recommended initial *adult* dosage is two tablets (2.5 mg. each) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is controlled. Maintenance dosage may be as low as two tablets daily. *Children's* daily dosage (in divided doses) varies from 3 mg. for a child of 3 to 6 months, to 10 mg. for one 8 to 12 years of age.

#### cautions and side effects:

Lomotil is an exempt narcotic; its abuse liability is low and comparable to that of codeine. Recommended dosages should not be exceeded. Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates.

Lomotil is a brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of atropine is added to discourage deliberate overdose.

## SEARLE

*Research in the Service of Medicine*

## Current Comment

### The Importance of Certificates of Vaccination—

Next to the passport, the most important document for foreign travel is the "International Certificate of Vaccination," according to the U. S. Public Health Service. The PHS reports that every day hundreds of world travelers who forgot this fact run into delays in quarantine. The reason: They fail to present a valid international certificate of vaccination against smallpox.

To be valid for international travel, the certificate must be completed in every detail, including the following items: (1) name of the persons vaccinated or revaccinated, (2) his signature, (3) sex, (4) date of birth, (5) date of vaccination or revaccination, (6) record of either primary vaccination, read as successful, or revaccination, (7) written signature of the vaccinating physician, even though his nurse or technician may have given the vaccination, (8) a stamp approved by the health administration of the country in which the vaccination was per-

formed. In the United States, this may be the stamp of the health department of the area in which the vaccinating physician practices.—*The Pennsylvania Medical Journal*

### Smith Klein and French Replenish Supplies in Hospital in Congo—

Smith Kline & French Laboratories, the prescription drug firm, announced recently that it has pledged financial support to help re-establish operations at Dr. Paul Carlson's mission hospital in the Congo.

Dr. Carlson is a prisoner of the Congolese rebels and has been sentenced to death. His hospital, at Wasolo in the northern Congo, was looted and damaged by rebel forces.

Smith Kline & French has notified Dr. L. Arden Almquist, Executive Secretary of World Missions for The Evangelical Covenant Church of America, Chicago, that it also will make available whatever of its products are required to help re-stock the hospital's drug supplies.

(Continued on page 31-A)

## PSYCHIATRY FOR THE MEDICAL PRACTITIONER

New Orleans, Louisiana

March 4-6, 1965

Sponsored by the DIVISION OF NEUROLOGY AND PSYCHIATRY OF TUORO INFIRMARY under a National Institute of Mental Health Grant.

### GUEST LECTURERS INCLUDE:

Jack Ewalt, M.D., Prof. of Psychiatry, Harvard Med. School, Past Pres. of American Psychiatric Association, Boston, Mass.

John Lambert, M.D., Medical Director, Four Winds Hospital, Washington, D.C.

Zigmond Lebensohn, M.D., Chief, Dept. of Psychiatry, Sibley Memorial Hospital, Washington, D.C.

William Sheeley, M.D., Director of Psychiatry & Medical Practice Project of the A.P.A., Washington, D.C.

Philip Solomon, M.D., Chairman, A.P.A. Committee on Medical Practice, Boston, Mass.

Course will be given at Jung Hotel, 1500 Canal Street, New Orleans, Louisiana. Hotel reservations to be made directly with the Jung or hotel of your choice. Registrants who would like to enjoy Mardi Gras (March 2) are urged to make hotel reservations **immediately**.

Guest speaker for the luncheon on March 4 will be George Burch, M.D., Henderson Professor and Chairman, Dept. of Medicine, Tulane Medical School. Subject: "Emotions and Cardiovascular Disease." Cost of luncheon included in registration fee. At the end of Friday's session, there will be a dutch treat two-hour cocktail party with George Lewis and his band from Preservation Hall entertaining.

### AMONG TOPICS TO BE DISCUSSED:

"Detection of Incipient Psychiatric Disorders During a General Medical Examination"

"Medical Practitioners and Supportive Handling of Schizophrenia"

"Adolescents — Disturbed and Disturbing"

"The Physician and His Reaction to the 'Crock' "

"Newer Thoughts About the Therapy of Alcoholism"

"Medical Conditions With Psychiatric Manifestations"

"Recognition and Treatment of Depressive Reactions by Medical Practitioners"

"Treatment of Emotional States by the Medical Practitioner"

Gene L. Usdin, M.D., Chief  
Division of Neurology and Psychiatry  
Tuoro Infirmary  
3516 Prytania Street  
New Orleans, La. 70115

Enclosed is my registration fee of \$20 for the "Psychiatry for the Medical Practitioner" course to be given March 4-6, 1965, at the Jung Hotel. (Checks should be made payable to the Tuoro Infirmary).

Name.....

Address.....



(Continued from page 28-A)

Smith Kline & French said its special interest in Dr. Carlson stems from the fact that he sponsored an American medical student who was broadening his clinical training at Wasolo through the Smith Kline & French Foreign Fellowships for Medical Students program. The student, Philip Littleford, of Baltimore, a senior in the Johns Hopkins University School of Medicine, was forced to flee the mission station when the rebels closed in late in August. Littleford originally had planned to return to the United States this month.

The Smith Kline & French program is now in its fifth year and has enabled more than 150 medical students to extend their skills through externships in the countries of Africa, Asia and Latin America.



... so when our next door neighbor got a new car, Joyce decided we needed a new car. When he put in a new swimming pool, we had to have one, too. This kept going on and on, then one day I found out he had a mistress ...

## PHYSICIANS' EXCHANGE

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**FOR SALE** — Well equipped office and good practice. Excellent location for general surgeon. New Burton-Wheeler hospital. Contact: Mason E. Lathrop, M.D., Wahoo, Nebraska.

**WANTED TO BUY** — A copy of "History of Medicine in Nebraska" by Tyler and Auerbach. Magic City Printing Company, Omaha, 1928. Vincent Moragues, M.D., Creighton Memorial Saint Joseph's Hospital, Omaha, Nebraska.

**GENERAL PRACTITIONER** wanted to join two-man partnership in unopposed, very active, north-eastern Nebraska practice. Twenty-four bed hospital. Starting salary open, then full partnership. J. T. Keown, M.D., and C. G. Muffy, M.D., Pender, Nebraska.

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**WANTED** — EENT Man or General Practitioner interested in specializing in this field, to become associated in a very busy office. Salary commensurate with ability, training; early partnership. Arrangements can be made for further study. Write Box 52, Nebraska State Medical Journal, 1315 Sharp Building, Lincoln, Nebraska.

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(1) Frykman, H.M.: *Minn. Med.*, Vol. 38, Jan. 1955.  
Poth, E.J.: *The J.A.M.A.*, Vol. 163, No. 15, April 13, 19.  
(3) McGivney, J.: *Texas State Jour. of Med.*, Vol. 51, No. Jan. 1955. (4) Stern, F. H.: *Jour. of The Amer. Ger. Sc*  
Vol. 11, No. 3, Mar. 1963. (5) Weekes, D. J.: *N.Y. St Jour. of Med.*, Vol. 58, No. 16, Aug. 1958. (6) Abbott, P.  
*Jour. of Oral Surg., Anes. & Hosp. Dental Serv.*, Vol. July 1961. (7) Weekes, D. J.: *E.E.N.T. Digest*, Vol. No. 12, Dec. 1963.

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## Current Comment

### The Pharmaceutical Industry—

In a publication issued this week, Empire Trust Company, New York, points out that lack of understanding of the pharmaceutical industry's contributions to the national welfare and prevailing antipathetic attitudes in legislative circles jeopardize both the public interest and the pharmaceutical industry's future.

The U.S. pharmaceutical industry has become the subject of attack and rebuttal, claim and counter-claim, to an extent perhaps unparalleled in the recent history of any other American industry.

The pharmaceutical manufacturing community is not without blemish. Like every other business community, it, too, is plagued by some irresponsible corporate citizens, whose malfeasances have been increasingly attributed to the industry as a whole. As a result, the industry's magnificent achievements — its monumental role in the prevention, cure, treatment and alleviation of dis-

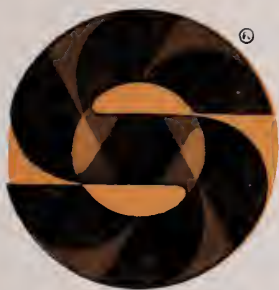
ease — have become obscured, in the public mind.

The US pharmaceutical industry's problems are complex, the bank publication states, and it is essential that they be recognized and appreciated — not only by legislative and regulatory bodies, but by the public in its own interest. The industry has a vast investment in research and the result has been health benefits to the nation and to the free world.

But the pharmaceutical industry cannot continue to make its vital contributions to the conquest of such critical problems as cancer, heart disease, geriatric ailments and mental health if it is hobbled by purely political or vindictive regulations.

The industry has been effective; for example, twenty-five years ago, New York City reported over 12,000 cases of whooping cough with 105 deaths. Last year there were 212 cases — deaths, none. In 1935, 70,080 Americans died of tuberculosis; in

(Continued on page 14-A)



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\*Loughlin, E. H. et al.: *Antibiot. Med.* 7:739, Dec., 1960.

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| Various, including pancreatitis, appendicitis and colitis | 27              | 23                          |
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## The Pharmaceutical Industry—

(Continued from page 8-A)

1963, 9311. Furthermore, in the 25 years between 1935 and 1960, prescription drugs saved the lives of two million working-age victims of only four "killer" diseases — pneumonia, influenza, tuberculosis and syphilis.

US drug manufacturers reinvest the equivalent of half their profits — after taxes — in research and development. Unlike such industry — categories as Aircraft and Missiles, or Electrical Equipment and Communications — where research is for the most part financed by government funds — pharmaceutical research is underwritten almost entirely by the industry itself.

## Medical Care and Income—

The average American in a recent year spent \$129 for all types of medical care — physician's services, hospitalization, drugs, and dental care. This single figure is indicative of the consequential place occupied by such expenditures in the family budget

and warrants the analysis presented in this issue of *Progress in Health Services*.

Contrasted with the average annual expenditure per person of \$129, the cost for the low income family of \$112 is but 73 per cent of the \$153 spent by families with incomes above \$7000. Undoubtedly the \$153 average for those with high income encompasses elective expenditures which might have been avoided, such as the private room in a hospital. This higher average also reflects the upward adjustment of physician's fees for those of higher income. Expenditures by those with low incomes to a degree represent frugal spending for care without amenities. But the low figure of \$112 certainly reflects, in some part, failure to secure needed medical services. For example, members of families with low incomes see a dentist only one-third as often as those in families with incomes of \$7000 or more.

A comparison of expenditures for low income families shows that their expenditures

(Continued on page 20-A)



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Arthralgen contains no sodium. Therefore, it is often a safer and more suitable analgesic for use in the long-term treatments of arthritic patients who have other conditions which require sodium restriction.<sup>1</sup>

## ARTHRALGEN®-PR (Arthralgen with prednisone)

Each tablet contains:

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| Salicylamide.....              | 250 mg. |
| Acetaminophen.....             | 250 mg. |
| Ascorbic acid (Vitamin C)..... | 25 mg.  |
| Prednisone.....                | 1 mg.   |

To help provide dosage flexibility in patients who require steroids, the basic Arthralgen formula is also available combined with prednisone as Arthralgen-PR. Prednisone is favored as the more advantageous steroid for use in Arthralgen-PR because it shows less tendency toward sodium retention, potassium excretion, and steroid-induced hypertension than that which often accompanies the use of cortisone and ACTH.<sup>2</sup>

### BRIEF SUMMARY

Arthralgen and Arthralgen-PR are indicated in the management of rheumatoid arthritis, acute gouty arthritis, rheumatoid spondylitis, osteoarthritis, bursitis, fibrositis, and neuritis. Arthralgen may be used for analgesia in colds, flu, and various myalgias.

**DOSAGE:** One or two tablets four times a day. After remission of symptoms dosage should be reduced to the minimum maintenance level.

**SIDE EFFECTS:** Nausea, GI upset, or mild salicylism may rarely occur. Symptoms of hypercorticism dictate reduction of dosage of Arthralgen-PR.

**PRECAUTION:** Reduction in dosage of Arthralgen-PR given over a long period should be gradual, never abrupt.

**CONTRAINDICATIONS:** Hypersensitivity to any ingredient.

As with any drug containing prednisone, Arthralgen-PR is contraindicated, or should be administered only with care, to patients with peptic ulcer, tuberculosis, nephritis, diabetes mellitus, acute psychoses, Cushing's syndrome (or Cushing's disease), overwhelming spreading (systemic) infection, or predisposition to thrombophlebitis.

Arthralgen-PR is generally contraindicated in patients with uremia and viral infections, including poliomyelitis, vaccinia, ocular herpes simplex, and fungus infections of the eye. It is also contraindicated in patients with chicken pox or susceptible persons exposed to it.

**SUPPLY:** Arthralgen (white, scored) and Arthralgen-PR (yellow, scored) tablets are available in bottles of 100 and 500.

REF: 1. Boreus & Sandberg, ACTA. PHYSIOL. SCAND., 28:266, 1953.  
2. Cohen, et al.: J.A.M.A., 165:225, 1957.

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## Medical Care and Income—

(Continued from page 14-A)

over time have increased proportionately more than those of high income families. Assuming that increased costs for a day of hospital care and other units of service have equally affected expenditures for both groups, it would appear that medical care is being given or is pushing for a more important place in the family budget. The fact that families with incomes less than \$2000 per year currently spend on the average about 13 per cent of their budget for medical care has important social implications. While some families have low expenditures, some of those with low income have very high expenditures. Under any measurement, the average of 13 per cent devoted to medical care supports the need for financial assistance from both private and governmental sources in meeting episodes of high cost medical care.—*Health Information Foundation*

## Clues to Occult Neoplasms—

The best available current therapy of malignancy includes its early detection. Unusual systemic manifestations are being associated with occult neoplastic lesions with increasing frequency. Early recognition and correlation of these symptoms and signs should help the physician to direct definitive investigation for the detection of cancer, according to an editorial in the *Texas State Journal of Medicine*.

Diseases of the skin may indicate an occult neoplasm. The accepted incidence of cancer of patients with dermatomyositis is about 15 per cent. This relationship increases considerably in patients who are more than 40 years old, with lesions of the stomach, breast, lung, and ovary being the most frequently diagnosed neoplasms. Other skin diseases which may be associated with an internal cryptic cancer include herpes zoster, acanthosis, nigricans, Bowen's disease, and erythema gyratum repens.

Among vascular manifestations to be investigated is a recurrent or migratory phlebitis which is resistant to therapy and which involves unusual or multiple sites.

(Continued on page 21-A)



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#### Clues to Occult Neoplasms—

(Continued from page 20-A)

Verrucous endocarditis secondary to an occult neoplasm without evidence of a bacterial disease may produce arterial embolism in the brain as well as elsewhere in the body.

Skeletal changes may be an indication of neoplasm. It is particularly important in a patient more than 50 years of age who develops an acute exacerbation or onset of arthritis which is resistant to treatment, to investigate for the possibility of cancer, especially of cancer of the lung. Clubbing of the fingers, synovitis and effusion of the joints are other signs which merit investigation.

Among metabolic signs of importance is hypercalcemia without evidence of hyperparathyroidism or osseous metastasis may be a less common manifestation of cancer. Carcinoma of the pancreas may be manifest by hyperglycemia with a severe hypokalemic alkalosis.

Peculiar neuromuscular symptoms, involv-

ing any portion of the nervous system may be the result of an otherwise unsuspected carcinoma.

Although some of the syndromes associated with occult neoplasm may be coincidental, but physicians awareness of these systemic clues may lead to an early diagnosis and more prompt and therefore more effective treatment of cancer.

#### Opportunity for the County Society President—

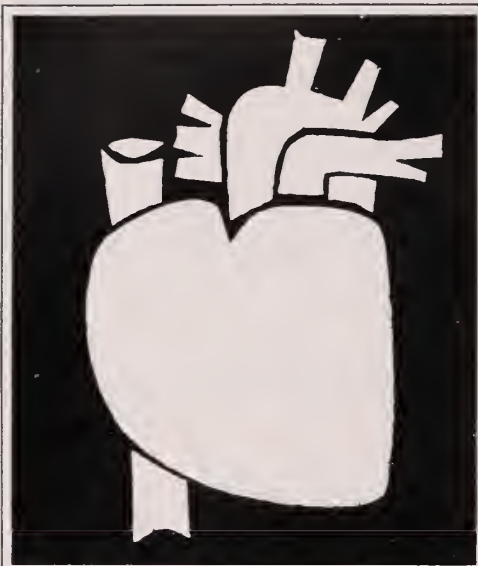
A man chosen as the county society president must have a comprehensive knowledge of the policies of the county as well as of the state and the American Medical Associations and be in accord with them. If he cannot conscientiously and wholeheartedly endorse these policies, according to the President's Page in the *Texas State Journal of Medicine*, he should never accept the office.

The president should have a well developed plan, including an outline of everything

(Continued on page 24-A)



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### Opportunity for the County Society President—

(Continued from page 21-A)

he hopes his Society can accomplish during his term of office. After deliberation and consultation he must be able to make decisions and then follow through. The selection of capable committee chairmen, who will help accomplish the stated goals, is of major importance. It is advisable to allow each chairman to choose those with whom he can work best. In order to encourage maximum participation of all society members, no member should serve on more than one committee.

Since committee members are appointed for specific duties, they should be replaced if they do not perform these duties and committees that are no longer needed should be dissolved. The planning of the "President's Program" and the selection of his committee chairmen should occur while he is president-elect. To delay until after installation of the president will cost much time, resulting in a lack of effectiveness.

The president of the county medical society has the responsibility of leadership in all community medical affairs. This requires that he be well informed and available at all times to represent the profession and to speak for his society. By utilizing these opportunities he can improve the image of the doctor by personal participation in the life of his community and by encouraging his colleagues to participate in a similar manner.

### Drugs and Ethics—

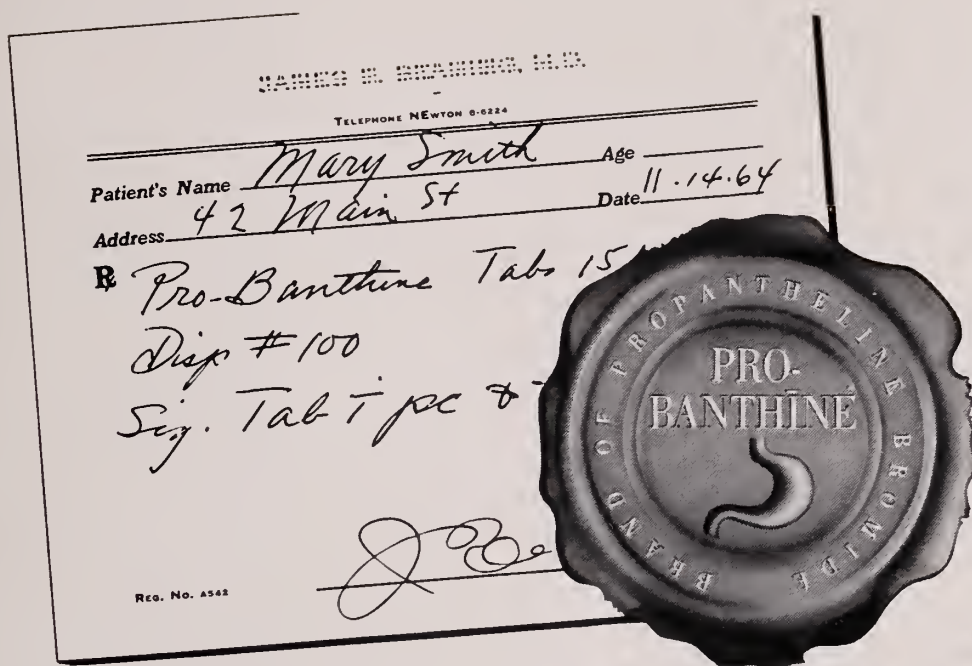
The Senate Subcommittee investigation of the financial interest of physicians in pharmacies and in drug-repackaging firms, indicated that at least 5000 doctors or about two per cent of the total number of doctors in the United States were involved in the ownership of about 100 repackaging and redistributing firms. An editorial in the *Wisconsin Medical Journal* quotes a Committee spokesman of stating that the total number of doctors having such ownership does not reflect a problem of overwhelming national significance, but it does suggest that in various regional markets these enterprises

(Continued on page 28-A)



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# Stamp of Approval on Virtually any Ulcer Regimen— **PRO-BANTHINE®** (propantheline bromide)

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*Research in the Service of Medicine*

## Drugs and Ethics—

(Continued from page 24-A)

could be extremely significant. The implication is that doctors who have such a financial interest would be inclined to favor the prescription products of the companies in which they have such an interest.

Testimony was offered indicating that even though doctors were among the owners of the firms, the doctors were too honest to allow their investments to influence their prescription of drugs. These investigations have occurred two years after the AMA House of Delegates and the AMA Judicial Committee had both ruled that it was unethical for a doctor to possess ownership of a drug repackaging firm or controlling interest in a pharmaceutical company while he practiced medicine. Obviously 5000 doctors in the United States have ignored the moral discipline of their profession and have continued to indulge in a situation which includes a possible conflict of interest.

Regardless of his personal integrity, the physician who owns a substantial share of the company that manufactures the drugs he prescribes exposes himself to the suspicion of working both sides of the street. It does not appear an unreasonable assumption that the doctor who can increase the return on his investment by prescribing a product in which he has a financial interest will do so. It was this possibility that caused the AMA to go on record explicitly condemning such conflicts of interest. For the good of the profession, such doctor-ownerships of repackaging firms should be entirely eliminated. There should be no possibility of doubt that the drugs prescribed by a doctor are free of any profit to the doctor. The distribution of the repackaging firms is usually of a local nature, and therefore county medical societies must bear their share of blame for tolerating, and thus condoning these questionable practices. Where such conflict of interest continues, vigorous and effective action starting at the local level and continuing up to the AMA, is essential.

---

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Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

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### Doctor Paul E. Carlson Memorial—

Dr. Paul E. Carlson practiced in Los Angeles before going to the Congo as a medical missionary. In the Congo he operated a 65-bed hospital and all of us know about his murder while engaged in this humanitarian project. The Los Angeles County Medical Association published, in their *Bulletin* on December 3, 1964, an "In Memoriam" for this devoted young physician. They also established a *Physician's Aid-Carlson Fund* for relief of the doctor's family. They invite all doctors and others to give to this fund. Any donation you may wish to give should be addressed to the Physician's Aid-Carlson Fund, 1234 North Vermont, Los Angeles, 29, California.



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March, 1965

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sutism, and excessive motor activity are occasionally encountered, especially in children, adolescents, and young adults. During initial treatment, minor side effects may include gastric distress, nausea, weight loss, transient nervousness, sleeplessness, and a feeling of unsteadiness. All usually subside with continued use. Megaloblastic anemia, aplastic anemia, leukopenia, granulocytopenia and pancytopenia have been reported. Nystagmus may develop. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. Adequate examination of the blood is advisable. DILANTIN (diphenylhydantoin sodium) is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm.

\*Lennox, W. G.: Epilepsy and Related Disorders, Boston, Little, Brown and Company, 1960, vol. 2, p. 865.

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### OUR COVER THIS MONTH—

Scout's Rest Ranch. It was here, in this old barn, that Buffalo Bill wintered his show and circus animals. The area is near North Platte, Nebraska. The place is now undergoing renovation and "Scouts Rest" will soon be open to the travelling public. (Photo by Richard Hufnagle, Lincoln).

MARCH, 1965

VOL. 50, NO. 3

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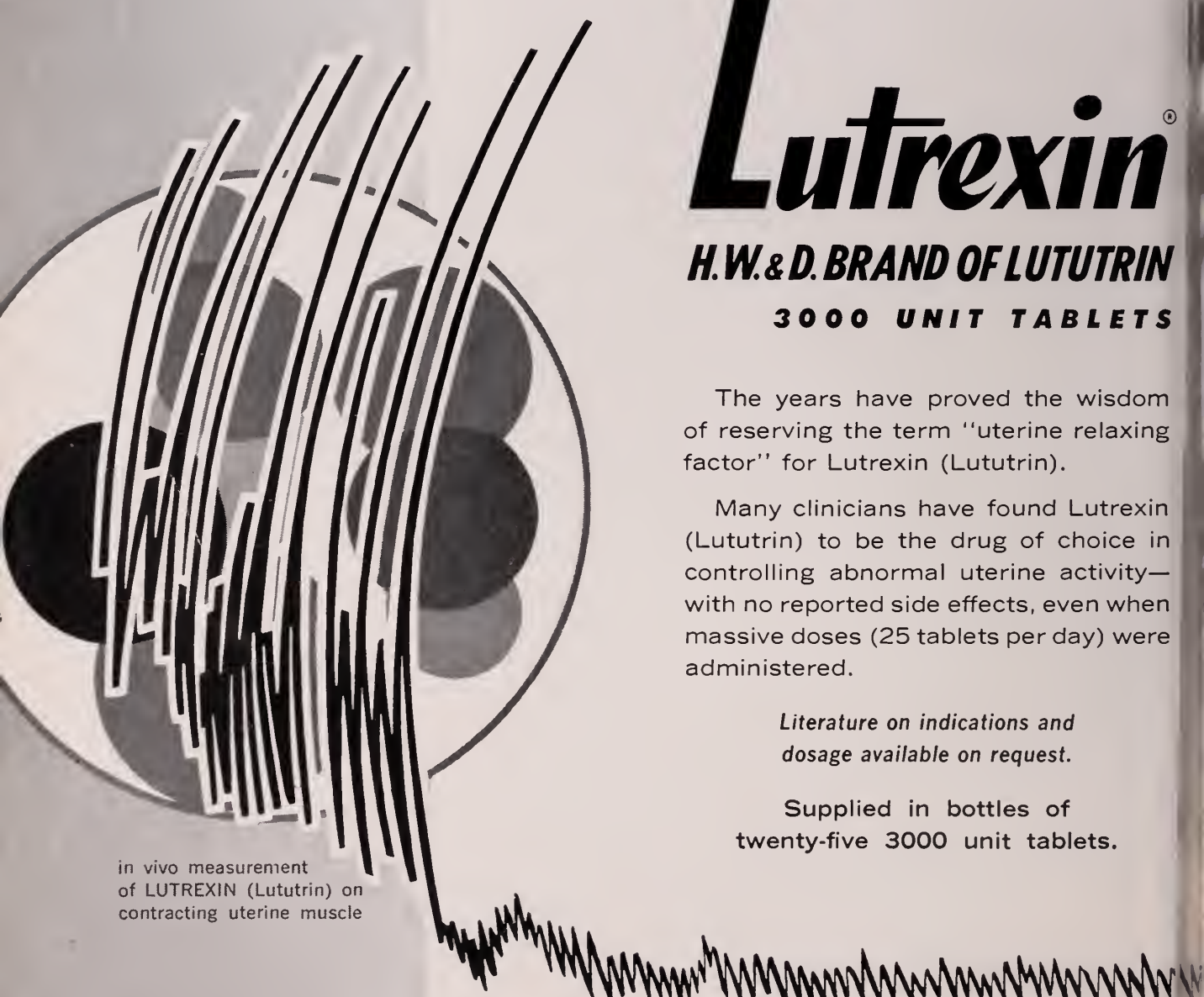
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Mrs. Jones?



...es, sir. She's down to 140/85.



Right. When we started, she was 195/120.



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...use it for all my hypertensives.



Does Regroton always work this well?



Not always. But the exception proves the rule.

**Composition:** Each tablet contains chlorthalidone, 50 mg., and reserpine, 0.25 mg.

**Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases.

**Warning:** Discontinue 2 weeks before general anesthesia, 1 week before electroshock therapy, and if depression or peptic ulcer occurs.

**Precautions:** Reduce dosage of concomitant antihypertensive agents by one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take particular care in cirrhosis or

severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use with caution in patients with ulcerative colitis, gallstones, or bronchial asthma.

**Side Effects:** Nausea, vomiting, diarrhea, muscle cramps, headaches and dizziness. Potential side effects include angina pectoris, anxiety, depression, drowsiness, hyperglycemia, hyperuricemia, lassitude, leukopenia, nasal stuffiness, nightmare, purpura, urticaria, and weakness.

For full details, see the complete prescribing information.

**Availability:** Bottles of 100 and 1000 tablets.  
**Average Dosage:** One tablet daily with breakfast.

\*Chupkovich, V.; Finnerty, F. A., Jr., and Kakaviatos, N.: The value of chlorthalidone plus reserpine in moderately severe and severe hypertension: A two year study. Presented at the 7th Inter-American Congress of Cardiology, Montreal, June 14-19, 1964.

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## Current Comment

### The State Medical Journal—

A State Medical Journal is a scientific publication that also includes the transactions of the meetings of the House of Delegates in the Council, according to an editorial in the *Wisconsin Medical Journal*. It does not publish all articles submitted to it but it encourages young authors, even though their efforts may require extensive editing, or may consist of a single case report.

The state journal is also a chronicle of medical news. It lists new members of the profession and continues with their noteworthy medical activities and terminates with their obituaries.

The State Medical Journal is in competition with a plethora of postgraduate courses, films, tapes and television as well as hundreds of medical journals. The other journals may be national, local, specialty or controlled circulation. Regardless of their variety, other journals in competition with

the state journal are numerous. All of these journals are competing for advertising revenue and of late some of the state medical journals are in varying degrees of acute and chronic advertising anemia. This is in contrast to what some readers considered excessive advertising pages in the journals of a few years back. A sharp decrease in new pharmaceutical products and the tremendous increase in control circulation (free) journals, has drastically curtailed the income from advertising.

The *State Medical Journal* is a bonus to members of the state medical society. It does justify its continued existence. In striving for excellence the result should be an improved journal of more benefit to the members of the society and, incidentally, more attractive to the advertiser.

### Orientation for New Members—

Doctors as individuals are among the best educated people in America, but as a group they know less about their county, state, and

(Continued on page 10-A)

# Tension complicated by pain?

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dependable tranquilaxant  
plus the analgesic effect  
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## Orientation for New Members—

(Continued from page 6-A)

national medical associations than others. The Texas Medical Association, after realizing the deficiency in the knowledge that its members have of organized medicine, requires each new member to attend an orientation program during his two years of probationary membership in the Society.

An opinion expressed on the President's Page of the *Texas State Journal of Medicine* describes the program as a great success. The orientation program has been of tremendous value to doctors entering practice. Additional requirements are suggested. Among the suggestions is the requirement that each doctor, during his probationary membership, be required to attend one annual session of the State Association for the benefit both of the new member and the Association. It is proposed that the orientation include attendance at the opening session of the House of Delegates. The guest would select at least one resolution as submitted to the House and follow it through the Reference Committee,

participating in the deliberations and then follow the resolution back to the House for its final action.

Additionally, it is suggested that the recent member be required to attend one session of the Executive Board to familiarize himself with the duties of the various councils, officers, committees. Such a course of orientation would provide the new member with an awareness of the mechanics of medical organization. He would become familiar with the policies and philosophy, and the means available to the State Medical Society. As a better informed member of medical groups, he would be more likely to take an active part in problems of his Society. Because he would be well informed and a participating member of his Society, he would better contribute to his community and to his profession.

## Use of Hospitals—

Per capita expenditures for hospital care have grown rapidly in recent years. In-

(Continued on page 12-A)



## in peptic ulcer therapy—"little things mean a lot"

it's the sum total of many subtle advantages that makes glycopyrrolate a superior anticholinergic

### ROBINUL® FORTE glycopyrrolate 2 mg. per tablet

### ROBINUL®-PH FORTE

glycopyrrolate 2 mg. / phenobarbital 16.2 mg. / (warning: may be habit forming)

The remarkable efficacy of Robinul (glycopyrrolate) in the treatment of peptic ulcer cannot be attributed to any single characteristic of the drug. Rather it is the sum total of several subtle pharmacologic advantages that enables this anticholinergic to make such a significant contribution to the total ulcer regimen.

Epstein<sup>1</sup> found glycopyrrolate's intensive antisecretory action to be exemplary. Breidenbach<sup>2</sup> was impressed by its pronounced antispasmodic effects. And Young and Sun<sup>3</sup> reported that a 2 mg. oral dose "did not affect gastric emptying or intestinal transit time. . . ." According to Slanger<sup>4</sup>, the absence of annoying side effects is an important plus factor ". . . for it permits ready individualization of dosage for control of mild to severe symptoms." Posey<sup>5</sup> sums it up when he says, "In effect, with glycopyrrolate, one approaches an ideal agent for the management of peptic ulcer. With it a vagolytic effect may be obtained without interfering with gastric emptying—the medical equivalent to vagectomy plus an adequate drainage procedure."

We invite you to try Robinul (glycopyrrolate) in your practice. Discover firsthand how several subtle advantages add up to make it the superior anticholinergic agent.

#### BRIEF SUMMARY

**INDICATIONS:** In addition to its primary indications for duodenal and gastric ulcer, glycopyrrolate is indicated for other G-I conditions which may benefit from anticholinergic therapy. Robinul-PH Forte (glycopyrrolate 2 mg. with phenobarbital) is indicated when these situations are complicated by mild anxiety and tension.

**CONTRAINDICATIONS:** Glaucoma, urinary bladder neck obstruction, pyloric obstruction, stenosis with significant gastric retention, prostatic hypertrophy, duodenal obstruction, cardiospasm (megaesophagus), and achalasia of the esophagus, and in the case of Robinul-PH Forte, sensitivity to phenobarbital.

**PRECAUTIONS:** Administer with caution in the presence of incipient glaucoma.

**SIDE EFFECTS:** Dryness of the mouth, blurred vision, urinary difficulties, and constipation are rarely troublesome and may

generally be controlled by reduction of dosage. Other side effects associated with the use of anticholinergic drugs include tachycardia, palpitation, dilatation of the pupil, increased ocular tension, weakness, nausea, vomiting, headache, dizziness, drowsiness, and rash.

**DOSAGE:** Should be adjusted according to individual patient response. Average and maximum recommended dose is 1 tablet three times a day: in the a.m., early p.m., and at bedtime. *See product literature for full prescribing information.*

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Robinul® (glycopyrrolate 1 mg. per tablet)

Robinul®-PH (glycopyrrolate 1 mg. per tablet)  
phenobarbital 16.2 mg.  
(warning: may be habit forming)

**REFERENCES:** 1. Epstein, J. H.: *Am. J. of Gastroent.*, 37:295, March, 1962. 2. Breidenbach, W. C.: *Investigative Clinical Report*, March, 1961. 3. Young, R., and Sun, D. C. H.: *Ann. N. Y. Acad. Sc.*, 99:174, Feb., 1962. 4. Slanger, A.: *Journal of New Drugs*, 2:215, July-Aug., 1962. 5. Posey, E. L., Jr.: *Am. J. Dig. Dis.*, 7:863, Oct., 1962.

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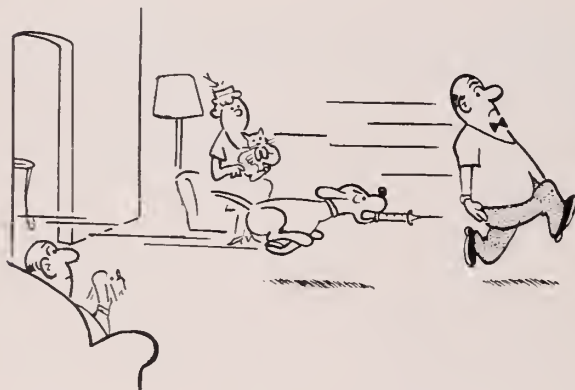
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### Use of Hospitals—

(Continued from page 10-A)

creased expenditures result not only from higher costs of a day of hospital service, but also from increased use of hospitals. These phenomena are a matter of concern, particularly to large purchasers of hospital insurance, because of the steadily rising premiums for such protection.

Many feel that the physicians and patients are using the hospital too lavishly — when not “medically necessary” — and that if use were at the “proper” level great savings could be realized. The level of use of hospitals varies considerably from one section of the country to another: from 90 to 150 admissions per 1,000 population, and from less than 1,000 days per 1,000 population to over 1,500 days. Since clear criteria are lacking as to what constitutes “proper” use of hospitals, the staff of Health Information Foundation felt that something might be learned about patterns of use if a large-scale survey of hospital admissions and discharges could be made in a well-defined geographical area.

It is a truism that people vary greatly in their perceptions of need for medical care and their motivations to seek it. Further, the medical practitioner must be and is accorded a great deal of discretion in how he handles individual patients. Despite these variations, however, the decisions fall into patterns as indicated by a study of a sample of hospital admissions in the state of Massachusetts.

Physicians' decisions to hospitalize their patients range from the majority being made unequivocally to a minority being in the realm of discretionary judgment. It can be assumed that the extent of the area of discretionary judgment will depend on the absence or presence of beds, ability to pay, and so forth.

The annual admission rate per 1,000 population in Massachusetts, through May 1961, exclusive of admissions for maternity care, was 116. If maternity cases are added, the admissions rate is about 145. Massachusetts had, therefore, a relatively high rate of hos-

(Continued on page 16-A)



**Of 5,057 patients with confirmed infections of all body systems... 4,731 or 93.5% were treated successfully with Signemycin®**

**Note:**

The high rate of response to Signemycin in these cases is noteworthy because the totals include many patients with difficult-to-treat infections, many whose infections had proved resistant to other agents, and many who had been treatment failures on other therapy.<sup>1-87</sup> In addition the following criteria were used for the cases cited: (1) only published results were used (2) results were confirmed by clinical and/or laboratory findings (3) patients were cured, not "improved" (4) dosage conformed with current recommendations in the United States (5) no other anti-infective agents were used concomitantly (6) no instance of prophylactic use was included in these tabulations.

| Condition                              | No. of Patients | No. Responded To Signemycin |
|----------------------------------------|-----------------|-----------------------------|
| Ear, nose and throat infections        | 507             | 465                         |
| Respiratory infections                 | 1,028           | 954                         |
| Gastrointestinal infections            | 425             | 387                         |
| Genitourinary infections               | 748             | 684                         |
| Skin and soft-tissue infections        | 1,088           | 1,036                       |
| Bone and joint infections              | 71              | 64                          |
| Deep-seated or generalized infections  | 257             | 251                         |
| Obstetrical & gynecological infections | 341             | 320                         |
| Miscellaneous conditions               | 592             | 570                         |
| <b>Totals</b>                          | <b>5,057</b>    | <b>4,731 (93.5%)</b>        |

**consistently effective...often when others fail**

# Signemycin®

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as triacetyloleandomycin, 83 mg.

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You don't look much different than you did  
\$500 ago.

## Use of Hospitals—

(Continued from page 12-A)

pital use compared with a national average, including maternity, of 125 to 130 per 1,000.

Of the total number of admissions included in the study ( $N = 2,046$ ), 89 per cent were due to illness and 11 per cent to accidents. Same-day emergency admissions, including accidents, accounted for 32 per cent of all admissions. (Five diagnostic categories account for almost one half, 44 per cent, of these same-day admissions: arteriosclerotic heart disease including coronary disease, appendicitis, fractures and dislocations, other injuries, and pneumonia).

One-third of the admissions, then, required round-the-clock stand-by facilities and personnel for handling emergencies of various degrees of severity. If maternity admissions are added, about 45 per cent of all admissions were judged to require immediate attention in the hospital.

Ten per cent of all admissions stayed in the hospital one day or less. Ten per cent of all patients admitted stayed 22 days or longer, and five per cent stayed over 30 days. The mean length of stay for all medical and surgical cases was 9.4 days.

It is of interest to determine the involvement of the general hospital in the care of patients with those diseases which are the leading causes of death. Heart diseases and other circulatory diseases accounted for 9.95 per cent of the admissions and 15.1 per cent of the days for all medical and surgical patients. Neoplasms accounted for nine per cent of the admissions and 11.7 per cent of the days. Care of patients with the diagnoses which are the two leading causes of death, then, accounted for nearly one-fifth of the admissions and over a quarter of the days.

Surgical admissions accounted for 49 per cent of the total, medical for 35 per cent, admissions for diagnostic tests for 14 per cent, and other sorts of admissions for the remaining two per cent.

DOCTOR — Does your wife like to read the Auxiliary news? Then be sure and take your copy home.



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Side Effects: Occasionally, mild salicylism may occur, but it responds readily to adjustment of dosage. Precaution: In the presence of severe renal impairment, care should be taken to avoid accumulation of salicylate and PABA. Contraindicated: An hypersensitivity to any component.

Also available: PABALATE—when sodium salts are permissible. PABALATE-HC—Pabalate-SF with hydrocortisone.

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## Current Comment

### The Other Side Doesn't Listen—

One of the big problems in American political discussion is that the other side seldom listens. With this introduction the *Wall Street Journal* in an editorial states that by the time opponents with new federal initiatives are ready to admit and discuss a problem the originators of the federal initiative are unwilling to talk about any alternative to their original proposal.

Hospital insurance for the elderly is said to be an example of such an impasse. Mr. Mills, Chairman of the House Ways and Means Committee has announced that there will be no public hearings on the proposal for hospital insurance for the elderly. His statement is based upon the opinion that sufficient hearings were held last year.

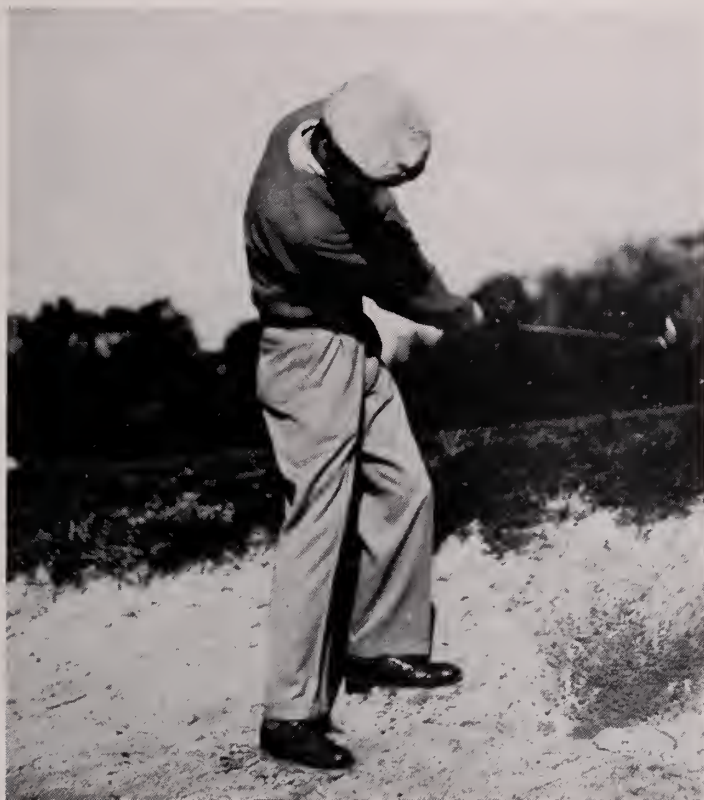
Since that time the American Medical Association, shifting its position, now advocates subsidization of private medical insurance for the elderly. Republican representatives also have indicated a willingness to

propose an alternative. In the absence of further hearings, it is unlikely that searching debate can compare the relative merits of the several alternative solutions to the problem of health care for the aged.

This type of rigidity in political life is particularly illustrated in the discussion of medical care for the aged, but it is also inherent in the discussion of many federal proposals.







**Your patient  
doesn't have  
to be in  
the Masters  
to get sprains  
and strains**

**'Soma' Compound helps  
relieve pain and relax muscle  
in many musculoskeletal  
disorders. Patient comfort  
can be increased and  
recovery time shortened.**

# Soma<sup>®</sup> Compound

carisoprodol 200 mg., phenacetin 160 mg., caffeine 32 mg.

**rational combination therapy for most patients with strains and sprains:  
relaxes muscle, relieves pain**

Also available as 'Soma' Compound with Codeine: carisoprodol 200 mg., phenacetin 160 mg., caffeine 32 mg., codeine phosphate 16 mg. (Warning: may be habit-forming.)

(Warning: Codeine may be habit-forming.) Indications: 'Soma' Compound and 'Soma' Compound with Codeine are useful for relief of pain and stiffness in traumatic, rheumatic and other conditions affecting muscles and joints. **Contraindications:** Allergic or idiosyncratic reactions to carisoprodol, phenacetin, or codeine phosphate. **Precautions:** *Phenacetin*—With long-term use, give cautiously to patients with anemia and cardiac, pulmonary, renal or hepatic disease. May damage the kidneys when used in large amounts or for long periods. *Caffeine*—Not recommended for persons extremely sensitive to its CNS stimulating action. *Codeine phosphate*—Use with caution in addiction-prone individuals. *Carisoprodol*—Carisoprodol, like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g. meprobamate. **Side effects:** Drowsiness, lightheadedness, dizziness, and gastric complaints have been reported infrequently for either or both of these preparations. *Phenacetin*—Side effects are extremely rare with short-term use of recommended doses. Prolonged ingestion of overdoses may produce dyspnea, cyanosis, hemolytic anemia, skin rash, anorexia, subnormal temperature, insomnia, headache, mental disturbances, and tolerance. *Caffeine*—Side effects are almost always the result of overdosage. Average doses may rarely cause nausea, nervousness, insomnia, and diuresis. Excessive dosage may produce, in addition, restlessness, nervousness, tolerance, tinnitus, tremors, scintillating scotomata, tachycardia, and cardiac arrhythmias. *Codeine phosphate*—Possible side effects are nausea, vomiting, constipation, and miosis. *Carisoprodol*—The only side effect reported with any frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms. One instance each of pancytopenia and leukopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross-reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reaction, carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression. **Dosage:** Usual adult dosage of 'Soma' Compound or 'Soma' Compound with Codeine is one or two tablets three times daily and at bedtime. **Supplied:** 'Soma' Compound, orange tablets, each containing carisoprodol 200 mg., phenacetin 160 mg., and caffeine 32 mg. 'Soma' Compound with Codeine, white capsule-shaped tablets, each containing carisoprodol 200 mg., phenacetin 160 mg., caffeine 32 mg., and codeine phosphate 16 mg. Narcotic order form required. *Before prescribing, consult package circular.*

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## Current Comment

### The Old-Fashioned Doctor—

"More often than one likes to hear, the question arises as to the whereabouts of the old-fashioned doctor. Fortunately for these 'remember-wheners,' the kindly old gentleman has gone the way of the old-fashioned ice box, the horse and buggy, and the old-fashioned patient.

"In his stead, we find a new-fashioned physician, keeping abreast of the rapidly progressing pace of life wherein his patients are living decades longer because of never-ending forward steps in the field of medicine.

"We would have to look hard and long to find anyone who wanted to backtrack to the days of 'kitchen table surgery.' On the other hand, we would find many people who are searching for the old doctor-patient relationship.

Being human should not be regarded as being old-fashioned; but rather, it should be accepted as one of the fundamentals upon which success in life or in the practice of medicine is predicted. For this reason alone, the term *old fashioned* should be relegated to the corner bistro where it can, by choice, serve to toast the achievements of the 'new-fashioned' days in medical care." — *The New Physician*



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## Geigy

Indications: Many types of edema involving retention of salt and water.

Contraindications: Hypersensitivity, and most cases of severe renal or hepatic disease.

Precautions: Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

Side Effects: Constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, leukopenia, muscle cramps, nausea, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.

Average Dosage: One tablet (100 mg.) daily with breakfast.

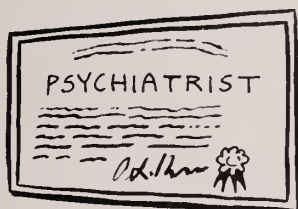
Availability: Tablets of 100 mg. in bottles of 100 and 1000.

For full details, see the complete prescribing information.

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Carcinoma of Colon in Children — J. N. Middlekamp and H. Haffner, Pediatrics 32:558 (Oct.) 1963.

Primary adenocarcinoma of the colon was observed in two children. These cases, together with 69 others, provide material for a review of primary carcinoma of the colon in children under 17 years of age. None of the 71 patients had pre-existing colitis or polyposis. There is a 2:1 predominance of boys to girls. Most of the children, 94.3%, were between 9 and 17 years of age. The signs and symptoms of carcinoma of the colon in children are similar to those seen in adults. The sites of carcinoma of the colon in decreasing frequency were: (1) sigmoid, (2) ascending colon, (3) splenic flexure, (4) transverse colon, (5) cecum, (6) descending colon, and (7) hepatic flexure. The rectal area was excluded from this review. Approximately 50% of these children had a highly invasive, signet ring type of adenocarcinoma. Signet ring adenocarcinoma has a very poor prognosis and is rare in adults. The other 50% had a well-differentiated adenocarcinoma. With early diagnosis and adequate resection there have been one eight-year and another 19-year survival in this group.



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TWO GENERAL PRACTITIONERS — Needed before July 1st by rapidly growing group. Starting salary \$18,000 and partnership after 1 year. Many fringe benefits. Excellent recreation area and a growing city. Write or call B. W. Spencer, M.D., or D. E. Eberle, M.D.; Ogallala Medical Clinic, Ogallala, Nebraska.

INTERNIST — To associate with Internist grossing \$95,000 annually. Excellent recreation facilities locally and new clinic building. Salary of \$20,000 for first year with opportunity to enter into active partnership after one year. Reply Box 53, Nebraska State Medical Journal, 1315 Sharp Building, Lincoln, Nebraska.

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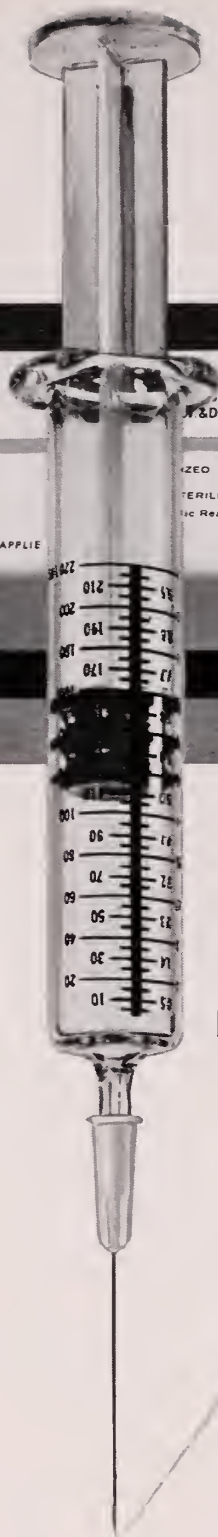
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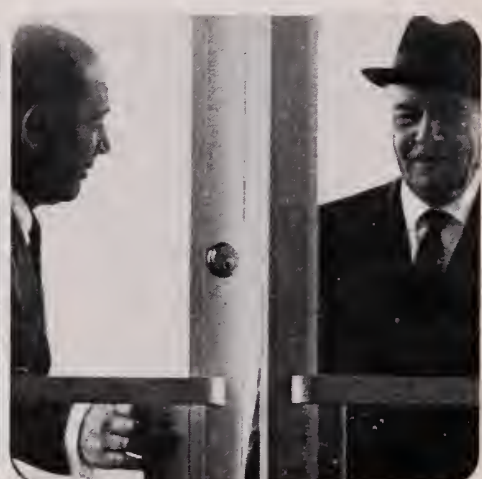
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**Electrolyte imbalance and potassium depletion may occur; take particular care in cirrhosis or**

severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use with caution in patients with ulcerative colitis, gallstones, or bronchial asthma.

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\*Chupkovich, V.; Finnerty, F. A., Jr., and Kakaviatos, N.: The value of chlorthalidone plus reserpine in moderately severe and severe hypertension: A two year study. Presented at the 7th Inter-American Congress of Cardiology, Montreal, June 14-19, 1964.

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## Current Comment

### Flourish of Charcoal Filters—

The tobacco companies this past year shoveled more charcoal onto the market, reports *Advertising Age*, January 4, as a result of the Surgeon General's report on smoking and health.

Liggett & Myers, which introduced the successful granulated charcoal filter *Lark* cigarette, in 1963, added a charcoal-menthol filter brand, *Devon*, to its line. Two other new charcoal filter brands to go on tobacco counters in 1964 were *Galaxy* from Philip Morris and *Tempo* by R. J. Reynolds.

Five brands added charcoal filters. There were American Tobacco's *Parliament* and *Carlton*, Philip Morris's *Philip Morris* and *Benson & Hedges*, and P. Lorillard's *York*. —*Texas State Journal of Medicine*

### Poll Shows How Physicians Spend Their Time—

More than 1200 physicians polled by *Medical Tribune* cooperated to show how American doctors spend their working hours.

Surgeons spend the least time in the office with almost half reporting that they see patients there only two to four hours a day. However, as might be expected, they spend more time attending private patients at the hospital than do physicians in other types of practice. Most time in the office was chalked up by psychiatrists, and around the hospital the least are the dermatologists.

General practitioners spend the most time on house calls as compared to other physicians, and radiologists, the least.

The poll did not determine total hours of work per week, but did indicate that nearly all doctors (92.2 per cent) keep office hours on Saturdays and one-third have evening hours. One Georgia internist volunteered that he works seven days and at least 80 hours per week, plus study time. He says he needs a 48-hour day. Heaviest work load may be that of a Virginia psychiatrist who directs a clinic and teaches from 9 to 5, then sees private patients from 5 to 11. — *Texas State Journal of Medicine*



# New broad-spectrum penicillin but without broad-spectrum toxicity<sup>1-10</sup>

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**Usual dosage:** Adults—250 mg. every six hours in respiratory infections; 500 mg. every six hours in urinary and gastrointestinal infections (higher doses may be needed in severe infections). Children—(under 13 years, whose weight will not result in a dosage higher than that recommended for adults) 100 mg./Kg./day in divided doses every six or eight hours for moderately severe infections; 200 mg./Kg./day in divided doses every six hours for severe infections.

**Contraindications:** (1) Hypersensitivity to penicillin. (2) Infections by penicillinase-producing staphylococci and other penicillinase-producing organisms.

**Side Effects:** Mild effects, such as skin rashes, diarrhea, nausea and vomiting have occasionally appeared.

**Precautions:** As with other antibiotics, precautions should be taken against gastrointestinal superinfection. To date, safety for use in pregnancy has not been established.

**Supplied:** No. 606—Each capsule contains 250 mg. of ampicillin. Bottles of 16 and 100.

**References:** 1. Editorial. *Brit. M. J.* ii:223 (July 22) 1961. 2. Rolinson, G. N., and Stevens, S.: *Brit. M. J.* ii:191 (July 22) 1961. 3. Stewart, G. T., *et al.*: *Brit. M. J.* ii:200 (July 22) 1961. 4. Brown, D. M., and Acred, E.: *Brit. M. J.* ii:197 (July 22) 1961. 5. Batchelor, F. R., *et al.*: *Nature* 183:257, 1959. 6. Knudsen, E. T., *et al.*: *Brit. M. J.* ii:198 (July 22) 1961. 7. Doyle, F. P., *et al.*: *Nature* 191:1091 (Sept. 9) 1961. 8. Acred, E., *et al.*: *Brit. J. Pharmacol.* 18:356, 1962. 9. Harrison, P. M., and Stewart, G. T.: *Brit. J. Pharmacol.* 17:420, 1961. 10. Editorial. *Lancet* ii:723 (Oct. 5) 1963.

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## Current Comment

### Accidents As a Cause of Death—

Accidents, the Nation's leading killer of youth, caused approximately 104,000 deaths in 1964, according to a report by the Public Health Service's Division of Accident Prevention. This number compares with 101,000 accident fatalities in 1963. About 50 million persons in the United States yearly become victims of accidental injuries which either restrict normal activity for a day or more or require medical attention.

All of the increase in fatalities was from motor vehicle accidents, which set a new high of about 48,000; 5,000 more than occurred in 1963.

The Public Health Service calculates that accidents in 1964 cost the Nation more than \$15 billion. About two million persons were hospitalized last year because of accidents, and over 11 million of the Nation's non-institutionalized population suffered long-lasting or permanent physical impairments from accidental injuries, the health agency reported.

Accidental injuries and deaths have become a very serious health problem of modern society. The report indicates that accidents are the chief cause of death in Americans aged one through 34. Among those 15-24, they are responsible for more deaths than all other causes combined.

### Death Rate High From Cardiovascular Disease—

The United States has the highest death rate from cardiovascular disease of any other country in the world. Second place is held by Finland which is followed then by Australia. The use and other data on mortality and illness from heart and blood vessel diseases appear in "Cardiovascular Diseases in the U.S.: Facts and Figures," a statistical handbook recently published by the American Heart Association.

This publication indicates that among the states of the union, South Carolina ranks highest in cardiovascular death rate and New Mexico has the lowest death rate. Non-

(Continued on page 20-A)

Indications: Many types of edema involving retention of salt and water.

Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.

Precautions: Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

Side Effects: Agranulocytosis, constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, impotence, leukopenia, muscle cramps, nausea, postural hypotension, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.

Average Dosage: One tablet (100 mg.) daily with breakfast.

Availability: Tablets of 100 mg. in bottles of 100 and 1000.

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brand of  
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**Note:**

The high rate of response to Signemycin in these cases is noteworthy because the totals include many patients with difficult-to-treat infections, many whose infections had proved resistant to other agents, and many who had been treatment failures on other therapy.<sup>1-87</sup> In addition the following criteria were used for the cases cited: (1) only published results were used (2) results were confirmed by clinical and/or laboratory findings (3) patients were cured, not "improved" (4) dosage conformed with current recommendations in the United States (5) no other anti-infective agents were used concomitantly (6) no instance of prophylactic use was included in these tabulations.

| Condition                              | No. of Patients | No. Responded To Signemycin |
|----------------------------------------|-----------------|-----------------------------|
| Ear, nose and throat infections        | 507             | 465                         |
| Respiratory infections                 | 1,028           | 954                         |
| Gastrointestinal infections            | 425             | 387                         |
| Genitourinary infections               | 748             | 684                         |
| Skin and soft-tissue infections        | 1,088           | 1,036                       |
| Bone and joint infections              | 71              | 64                          |
| Deep-seated or generalized infections  | 257             | 251                         |
| Obstetrical & gynecological infections | 341             | 320                         |
| Miscellaneous conditions               | 592             | 570                         |
| <b>Totals</b>                          | <b>5,057</b>    | <b>4,731 (93.5%)</b>        |

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## Death Rate High From Cardiovascular Disease—

(Continued from page 16-A)

whites in the U.S. have a higher cardiovascular death rate than whites in all age groups except the oldest. This is true even though white males experience higher death rates from coronary disease than do non-whites. At age 50, one out of every hundred white males develops coronary disease during the course of a year. In 1900, cardiovascular diseases accounted for 20 per cent of all deaths in the United States. Today they account for 54.5 per cent — claiming nearly a million lives annually.

The 32-page publication includes the answers to common questions about the frequency of deaths and illness caused by cardiovascular disease as well as a section on morbidity and on incidence and prevalence of hypertension and the major forms of heart disease.

Adults who have either heart disease or high blood pressure number over 21.5 mil-

(Continued on page 25-A)

**SPONG  
HOSPITAL**



I'm sorry Mabel, but I'm afraid I'll have to break our engagement . . . Doc says I have a bad case of DERMATOPHITOSIS.



## Death Rate High From Cardiovascular Disease—

(Continued from page 20-A)

lion definite cases in the United States according to the prevalence data. More than 10 million have heart disease related to high blood pressure, and approximately seven million are believed to have high blood pressure without heart disease.

A study of trends in death rates indicates that the death rate from cardiovascular disease is probably going down. The total number of people dying is larger, but the number of deaths per one hundred thousand members of the population is diminishing. The higher totals reflect the fact that there are more people in the United States today and they are living longer. More people are likely to reach the older age brackets in which cardiovascular diseases takes their greatest toll.

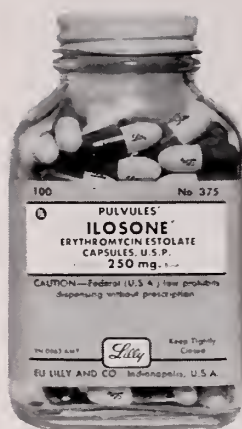
A breakdown of the different disease categories shows significant variations. The greatest decline in death rate has occurred with regard to hypertension and hypertensive heart disease and with regard to rheumatic heart disease. The stroke death rate decline is less pronounced and in the coronary category there has been a moderate rise.

**Side effects and precautions:** The transitory drowsiness which may occur with hydroxyzine HCl usually disappears spontaneously in a few days with continued therapy, or is correctable by dosage reduction. Dryness of the mouth may be seen with higher doses. Involuntary motor activity has been reported in hospitalized patients on higher than recommended doses. Hydroxyzine HCl may potentiate CNS depressants, narcotics such as meperidine, barbiturates, and anticoagulants. In conjunctive use, dosage for these drugs should be decreased. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. **Parenteral Solution Precautions and contraindications:** This dosage form is intended only for I.M. or I.V. administration and should not, under any circumstances, be injected subcutaneously or intra-arterially. When the usual precautions for I.M. injection have been followed, reports of soft tissue reactions have been rare. I.V. administration should be slow, no faster than 25 mg. per minute, and should not exceed 100 mg. in any single dose. Particular care should be used to insure injection only into intact veins; a few instances of digital gangrene occurring distal to the injection site have been attributed to inadvertent intraarterial injection or periarterial extravasation, both of which should be avoided. **More detailed professional information available on request.**



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added  
margin*



*to meet an  
extra  
challenge*

Test-tube activity of a drug is only one indication of its effectiveness. More important is the amount of antibacterial activity at the site of infection.

Ilosone® produces peak levels of antibacterial activity *two to four* times those of other erythromycin preparations. Furthermore, it attains them earlier and maintains them longer.

**Contraindications:** Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

**Side-Effects:** Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

**Dosage:** *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

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# Recommended Dosage of Lomotil Liquid to Control Diarrhea

*File ✓  
Diarrhea*

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| Age              | INITIAL LOMOTIL LIQUID DOSAGE*                                                                                                                                                                                             |
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| 1-2 yr. . . . .  | 1/2 tsp. 5 times daily (5 mg.)                                                                                                            |
| 2-5 yr. . . . .  | 1 tsp. t.i.d. (6 mg.)                                                                                                                     |
| 5-8 yr. . . . .  | 1 tsp. q.i.d. (8 mg.)                                                                                                                     |
| 8-12 yr. . . . . | 1 tsp. 5 times daily (10 mg.)                                                                                                             |
| Adult . . . . .  | 2 tsp. 5 times daily (20 mg.) <br>(or 2 tablets q.i.d.)  |

\*Based on 4 cc. per average teaspoonful.

Note: After diarrhea is controlled the initial dosage can usually be reduced to meet the requirements of the individual patient.

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Each tablet and each 5 cc. of liquid contains:

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(Warning: May be habit forming)

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### Cautions and Side Effects

Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia.

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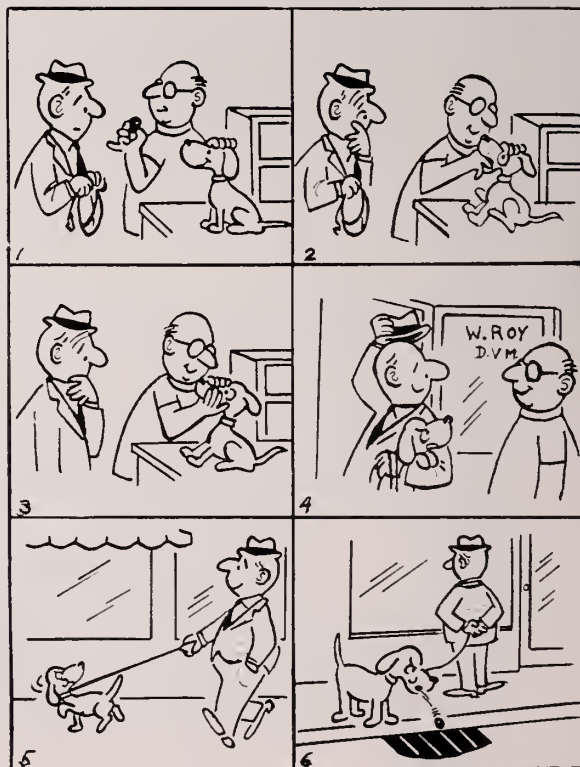
## Current Comment

### On the Great Society—

The influence of the enlightened leaders of thought and of state in an affluent society may be seen in the recommendations of the President's Commission on Heart Disease, Cancer, and Stroke reported in December, and in the President's recent health message to Congress that included several of the Commission's recommendations. An editorial in *The New England Journal of Medicine* comments that this approach to solving the health needs of the people of a great society cannot but result in practical, knowing doubts in the physician who has had long experience with the practice of medicine.

In the report and in the President's message are "words and phrases . . . (providing) a glimpse into an idealistic state of future well being that he cannot quite comprehend because of its magnitude." The physician doubts because his scientific training and his pragmatic philosophy has led him to believe that there are things that money

(Continued on page 30-A)





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**On the Great Society—**

(Continued from page 28-A)

cannot buy. "... There are pills, no matter how sweet and potent, that are too big to be swallowed."

The President's Health Program includes so many proposals for the improvement of and distribution of medical care that their implementation would call for federal expenditures and for planning, design, construction, and manpower which are almost beyond the comprehension of the average taxpayer.

The President's Program is not beyond implementation and his recommendations do reflect a need in many areas which require study and action. The breadth of the proposal and the number of items to be provided, suggest caution for it is believed that the health needs of the great society cannot be met in a frenzy of federal programs and spending. It is believed that Congress will realize the difficulty of meeting all apparent needs in a single legislative act. It is reasonable to expect that the resulting legisla-

tion will reflect a practical approach which requires that despite pressures and urgencies, one thing at a time must be done well.



He's a bit squeamish about shots.



# THE NEBRASKA STATE MEDICAL JOURNAL

2430 Lake Street, Lincoln 2, Nebraska

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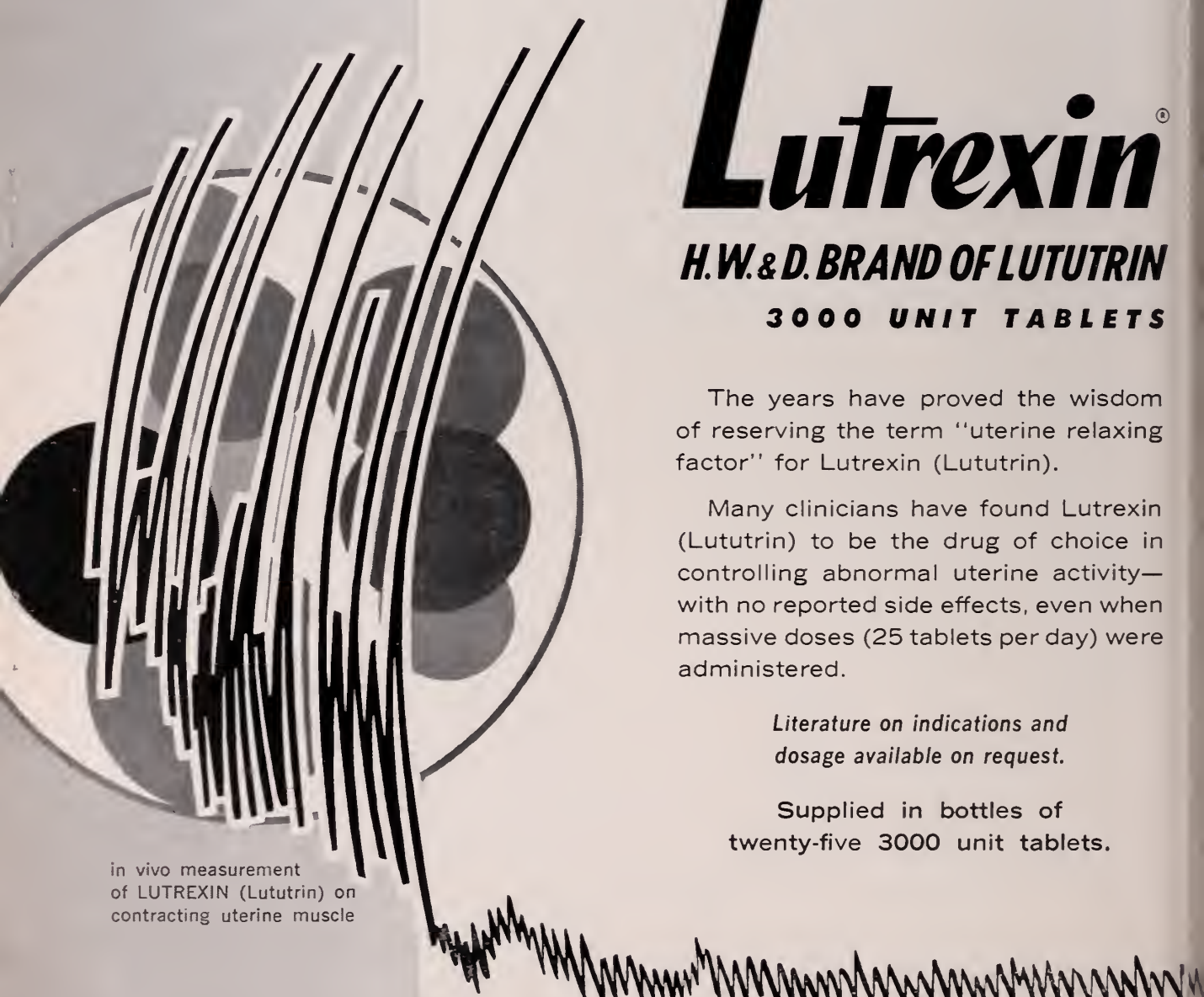
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**References:** 1. Handelman, Cathryn C.: Early management of acne, *Pediat. Clin. North America* 8:265, Feb., 1961. 2. McLean, I. E. D.; Graham, K. T., and East, M. O.: The treatment of acne; a trial of "pHisoHex," *Practitioner* 189: 82, July, 1962. 3. Hodges, F. T.: Therapeutic applications of an antiseptic detergent, *GP* 14:86, Nov., 1956. 4. Wexler, Louis: Treatment of acne vulgaris, *Clin. Med.* 70:404, Feb., 1963.

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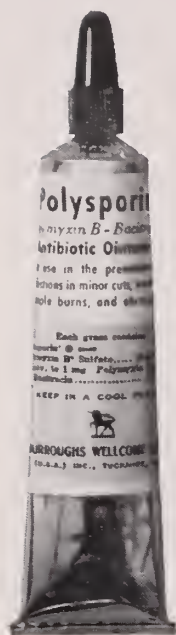
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### Current Comment

#### Eye Safety Lenses—

The development of newer and safer materials for optomic lenses makes available better protection for the eyes of those who are subject to hazards.

An editorial in the *Texas State Journal of Medicine* states that the legislatures of several states have passed laws requiring compulsory protection of certain population groups. Both Ohio and Massachusetts require "eye protective devices" for pupils, teachers and visitors in public school laboratories, work shops and vocational and industrial arts classes. California requires prescription of safety lenses for those who need corrective optomic lenses if their sight is limited to one eye or if in occupations of law enforcement and fire fighting.

Physicians are exhorted to have knowledge about available safety materials and equipment in order that they may counsel their patients with regard to eye safety. About

90 per cent of the 1,000 eye injuries which occur each day in industry could be prevented by suitable safety measures.

The protective ability of various materials used in corrective lenses can be determined by experimental evidence. Ordinary glass offers fairly good protection against perforation of the eyeball by small low velocity missiles. If the missile is more than two millimeters in diameter, travels at a relatively high velocity, and is of irregular contour, safety material is necessary for protection.

Contact lenses, although usually made of plastic with a high impact resistance, afford but limited protection because of the thinness of the lense. Contact lenses add to the hazard of exposure to chemical dust because of the trapping of dust between the contact lens and the eyeball. Contact lenses are dangerous if there is a risk of splashing chemicals into the eyes because the presence of the lens prohibits the essential treatment of quick irrigation.

**One antibiotic superior to**  
**Tetracycline**  
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**Streptomycin**  
**Kanamycin**  
**Polymyxin B**  
**Penicillin G**  
**against *Proteus mirabilis* and *E. coli***



*Proteus mirabilis* is not only the most common cause of *Proteus* infections of the urinary tract, but such infections are often resistant to other antibiotics.<sup>1-4</sup> According to Anderson *et al.*,<sup>5</sup> "When assessed in terms of serum levels attainable with usual dosage regimens, ampicillin was the most effective drug tested against *E. coli* and *P. mirabilis*." These authors found *Klebsiella-Aerobacter* and *Pseudomonas* organisms relatively insusceptible to ampicillin. With its broad-spectrum coverage of many gram-positive and gram-negative bacteria, absence of toxicity, and slow emergence of resistant strains, PENBRITIN (ampicillin) is a most beneficial and safe drug in treating urinary tract infections—killing the pathogens, not just suppressing them.

**Dosage:** Adults—500 mg. every six hours (higher doses may be required for severe infections). Children—(under 13 years, whose weight will not result in a dosage higher than that recommended for adults) 100 mg./Kg./day in divided doses every six or eight hours

for moderately severe infections; 200 mg./Kg./day in divided doses every six hours for severe infections.

**Contraindications:** (1) Hypersensitivity to penicillin. (2) Infections by penicillinase-producing staphylococci and other penicillinase-producing organisms. *Aerobacter aerogenes*, *Pseudomonas pyocyanea*, and *Proteus morganii* are resistant to PENBRITIN (ampicillin).

**Side Effects:** Mild effects, such as skin rashes, diarrhea, nausea and vomiting, have occasionally appeared.

**Precautions:** As with other antibiotics, precautions should be taken against gastrointestinal superinfection. To date, safety for use in pregnancy has not been established.

**Supplied:** No. 606—Each capsule contains 250 mg. of ampicillin. Bottles of 16 and 100.

**References:** 1. Hanson, R. J., *et al.*: J. Urol. 79:1016 (July) 1958. 2. Middletown, J. E.: Brit. M. J. ii:497 (Aug. 31) 1957. 3. Today's Drugs, Brit. M. J. i:1475 (May 26) 1962. 4. Brumfitt, W., *et al.*: Lancet i:130 (Jan. 20) 1962. 5. Anderson, K. N., *et al.*: J.A.M.A. 187:87 (Feb. 22) 1964.

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## Current Comment

### Surgical Technicians Replace Nurses—

In recent years the number of nurses interested in operating room duty has steadily declined. Perhaps because of the volume of emergency and night work as well as the protracted and sometimes tedious procedures, operating room duty has apparently become less popular for nurses.

An editorial in the *Pennsylvania Medical Journal* describes the problem and the answer that is attributed to the experience of surgeons who during World War II worked with surgical technicians. In the civilian hospital, personnel were recruited to fill the gap and their training of the on-the-job variety was unplanned and often brief. Actually, some assistance in the operating room were orderlies or maids who had been trained to carry out some of the functions of the scrub nurse.

Several years ago, five Pennsylvania hospitals set up training courses for surgical technicians. Although the courses varied

in both content and length and in requirements for practical experience, they were structured to produce individuals capable of becoming scrub nurses or supplemental operating room assistants.

There has evolved a training program which is both didactic and practical and which includes instruction in anatomy, pathology, microbiology, asepsis, the care of surgical equipment, and the procedures used in surgery. More important, an attempt is made to convince the trainees of their own possible hazard and the responsibility which they must assume.

There is as yet no standardization of the surgical technicians training and there are no minimum requirements for the use of the "technician" title.

There is also no legal status for such personnel.

The joint commission recognizes that qualified nurses, aides, or technicians may be used as an assistant to the surgeon but may

(Continued on page 14-A)





Of 341 patients with confirmed  
OB-GYN infections...  
320 or 93.8% were treated  
successfully with Signemycin®

**Note:**

In 50 cases of serious puerperal and postabortal infections treated with Signemycin, complete cure was observed in 49 patients.\* Duration of therapy ranged from three to eight days. Appropriate surgical measures were applied as indicated.

\*Heredia Díaz, J. et al.: *Medicina (Mex.)* 38:308, July 10, 1958.

| Condition                   | No. of Patients | No. Responded to Signemycin |
|-----------------------------|-----------------|-----------------------------|
| Abortion, infected          | 45              | 44                          |
| Adnexitis (parametritis)    | 66              | 61                          |
| Cervicitis                  | 18              | 18                          |
| Endometritis                | 64              | 61                          |
| Mastitis and breast abscess | 44              | 42                          |
| Puerperal sepsis            | 14              | 14                          |
| Salpingitis                 | 39              | 34                          |
| Other ob-gyn infections     | 51              | 46                          |
| Totals                      | 341             | 320 (93.8%)                 |

consistently effective...often when others fail

# Signemycin®

tetracycline HCl, 167 mg.; oleandomycin  
as triacetyloleandomycin, 83 mg. capsules (250 mg.)

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## Surgical Technicians Replace Nurses—

(Continued from page 10-A)

not displace the qualified physician first assistant for a procedure with unusual hazard to life.

In Pennsylvania, the surgical technician cannot legally serve as a circulating nurse or take emergency calls in place of professional nurses in the operating room. It is possible that an American College of Surgeons' Committee which has been studying this subject may propose standards for technician schools. The surgical technician may achieve a status similar to that of the X-ray technician or the laboratory technologist. Such a development would enable the use in the hospital of this class of personnel with benefit to the hospital and its patients.

## Social Security Tax—

The Social Security tax, if raised in accordance with legislative proposals to finance Medicare will by 1987 reach 5.6% on the first \$6,000 of earnings.

According to the *Wall Street Journal*, to

satisfy the bill's tax rates, a 21-year-old worker just entering the labor force could pay as much as \$15,470 during his productive years before becoming eligible for increased medical and pension benefits at age 65. If banked instead at a 3½% interest rate, his tax payments would have produced a \$34,974 retirement nest egg, analysts say.

The proposed schedule also would put the payroll tax payments far above Federal income tax bills for low-income taxpayers. A \$3,600 a year married couple with two children would pay \$201.60 in Social Security taxes in 1987, compared with an income tax of \$88 at present rates.

## The Physicians' Club of New York—

An offer to join the Physicians' Club of New York proved attractive to many physicians in the New York City area. More than 37,000 physicians in Pennsylvania and New York were offered charter membership in the organization and more than 3,500 indicated their acceptance of the invitation by

(Continued on page 16-A)



Of 1,028 patients with confirmed  
respiratory infections...  
954 or 92.8% were treated  
successfully with Signemycin®

**Note:**

Hammerl\* selected his patients for treatment with Signemycin on the basis of demonstrated bacteriological resistance to other antibiotics or failure of previous therapy. Of 100 patients with various respiratory tract infections, 95 responded to Signemycin®. Pathogens isolated included staphylococci and *Diplococcus pneumoniae*.

\*Hammerl, H.: Wien. Med. Wschr. 108:629, July 26, 1958.

| Condition                      | No. of Patients | No. Responded To Signemycin |
|--------------------------------|-----------------|-----------------------------|
| Abscess, pulmonary             | 17              | 16                          |
| Bronchiectasis                 | 19              | 13                          |
| Bronchitis                     | 286             | 267                         |
| Bronchopneumonia               | 192             | 179                         |
| Empyema                        | 12              | 11                          |
| Pneumonia, lobar               | 150             | 146                         |
| Pneumonia, other febrile       | 160             | 150                         |
| Various infected pneumopathies | 192             | 172                         |
| Totals                         | 1,028           | 954 (92.8%)                 |

consistently effective...often when others fail

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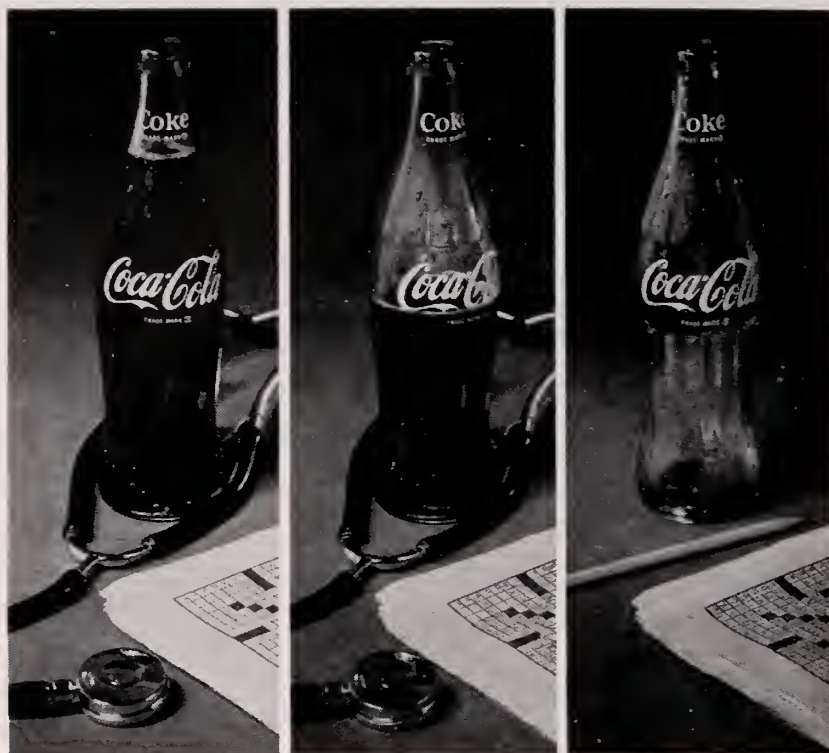
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things go  
better  
with  
**Coke**  
TRADE MARK ®

The Physicians Club of New York—

(Continued from page 14-A)

remitting the charter membership dues of \$10.

Later it was learned, according to the *Pennsylvania Medical Journal*, that there was no club and that there were no Articles of Incorporation. The Board of Governors listed in the promotional material had never met. An investigation was made by the New York Attorney General's Office and by the Medical Society of the County of New York.

As a result of the investigation, the charter members in the non-existing club will get their money back. The organizers of the Club were persuaded to deliver the dues to the Attorney General's Office which will mail refund checks.

As a sequel to this incident, the editor of *New York Medicine* conducted a survey in New York and found that there is an interest on the part of physicians in organizing a club and it appears that with more responsible direction, an attempt may be

made to meet the demand which was uncovered by the original and illfated organization.



We passed the hat around the office Fred, but what would you want with a lot of old rubber bands, and paper clips?



**Of 5,057 patients with confirmed infections of all body systems... 4,731 or 93.5% were treated successfully with Signemycin®**

**Note:**

The high rate of response to Signemycin in these cases is noteworthy because the totals include many patients with difficult-to-treat infections, many whose infections had proved resistant to other agents, and many who had been treatment failures on other therapy.<sup>1-87</sup> In addition the following criteria were used for the cases cited: (1) only published results were used (2) results were confirmed by clinical and/or laboratory findings (3) patients were cured, not "improved" (4) dosage conformed with current recommendations in the United States (5) no other anti-infective agents were used concomitantly (6) no instance of prophylactic use was included in these tabulations.

| Condition                              | No. of Patients | No. Responded To Signemycin |
|----------------------------------------|-----------------|-----------------------------|
| Ear, nose and throat infections        | 507             | 465                         |
| Respiratory infections                 | 1,028           | 954                         |
| Gastrointestinal infections            | 425             | 387                         |
| Genitourinary infections               | 748             | 684                         |
| Skin and soft-tissue infections        | 1,088           | 1,036                       |
| Bone and joint infections              | 71              | 64                          |
| Deep-seated or generalized infections  | 257             | 251                         |
| Obstetrical & gynecological infections | 341             | 320                         |
| Miscellaneous conditions               | 592             | 570                         |
| Totals                                 | 5,057           | 4,731 (93.5%)               |

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## Current Comment

### National Pediatrics Group Recommends PKU Testing—

The American Academy of Pediatrics has recommended that all newborn infants be tested for phenylketonuria (PKU), before they are discharged from the hospital. The blood test must not, however, be performed until after the infant has been on milk feedings for 24 hours. Two types of blood tests are available — one is a bacteriological assay (the Guthrie test) and the other includes chemical procedures.

Commenting on the recommendation, Dr. E. H. Christopherson, executive director of the Academy, noted that the Academy takes no position on making screening tests mandatory by state law, although a few states have passed such laws on PKU testing.

"The Academy believes that passing laws requiring screening tests or any other procedure is not an effective method for improving health care services," Dr. Christopherson said. "Rather the Academy believes that such procedures are best worked out cooperatively on a local level — by physicians, hospitals, and health departments."—*Texas State Journal of Medicine*



It's bad news, isn't it, Doctor? I can see it in your face . . .

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chlorthalidone

the long-acting  
diuretic

**Indications:** Many types of edema involving retention of salt and water.

**Contraindications:** Hypersensitivity and most cases of severe renal or hepatic disease.

**Precautions:** Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

**Side Effects:** Agranulocytosis, constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, impotence, leukopenia, muscle cramps, nausea, postural hypotension, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.

**Average Dosage:** One tablet (100 mg.) daily with breakfast.

**Availability:** Tablets of 100 mg. in bottles of 100 and 1000.

For full details, see the complete prescribing information.

\*Swartz, C., et al.: *Circulation* 28:1042, 1963.



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**Side effects and precautions:** The transitory drowsiness which may occur with hydroxyzine HCl usually disappears spontaneously in a few days with continued therapy, or is correctable by dosage reduction. Dryness of the mouth may be seen with higher doses. Involuntary motor activity has been reported in hospitalized patients on higher than recommended doses. Hydroxyzine HCl may potentiate CNS depressants, narcotics such as meperidine, barbiturates, and anticoagulants. In conjunctive use, dosage for these drugs should be decreased. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. **Parenteral Solution Precautions and contraindications:** This dosage form is intended only for I.M. or I.V. administration and should not, under any circumstances, be injected subcutaneously or intra-arterially. When the usual precautions for I.M. injection have been followed, reports of soft tissue reactions have been rare. I.V. administration should be slow, no faster than 25 mg. per minute, and should not exceed 100 mg. in any single dose. Particular care should be used to insure injection only into intact veins; a few instances of digital gangrene occurring distal to the injection site have been attributed to inadvertent intraarterial injection or periarterial extravasation, both of which should be avoided. **More detailed professional information available on request.**

**Gastric Freezing** — A. J. Kauvor, H. B. Karsh, and G. Hermann (1245 E. Colfax Ave., Denver). Arch Surg 89:985 (Dec.) 1964.

In contrast to initial studies, subsequent clinical and laboratory trials of gastric freezing have interjected serious reservations about this new mode of therapy. This study was initiated to evaluate the results of gastric freezing, subjectively and objectively by means of pre- and post-freeze overnight and by augmented histamine collections of gastric secretions, on 21 patients with active peptic ulcer. Pre-and-post secretory studies failed to reveal any significant depression of acid secretion. Gastric ulcers occurred as a direct consequence of gastric freezing in two patients. It must be, therefore, concluded that the present technique of gastric freezing is not effective as measured by objective acid secretory studies, nor can it be considered without risk in view of the complication encountered.



Let's see now, the backbone's connected to the hip bone, and the hip bone's connected to the thigh bone and the thigh bone's connected to the . . . . .

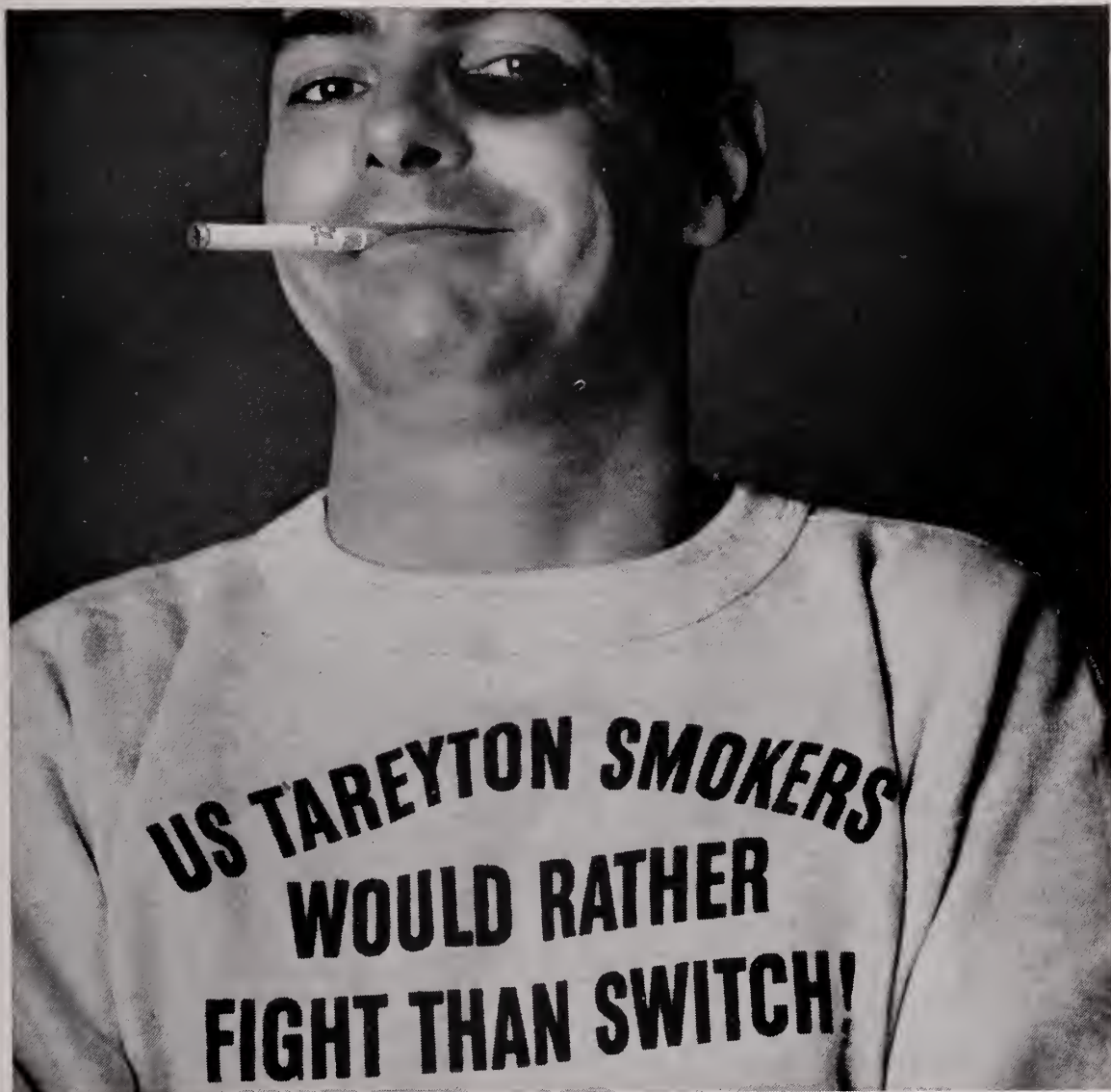


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**The General Practitioner in a Changing  
World — J. D. Rising (University of Kan-  
sas Medical Center, Kansas City). Canad  
Med Assoc J 91:1101 (Nov. 21) 1964.**

Throughout the world there is need for physicians to render primary and continuing health care to individuals, families, and communities, and there is growing concern over the deficiency of such doctors. In the USA, there has been a decrease in the number of general practitioners and others who are in the best position to render this kind of service, and the number of medical graduates entering this field continues to decline. Many reasons for this state of affairs have been offered, but one fact stands out above all others: the majority of medical students wish to engage in a career of service and significance, but are unwilling to become second class physicians. If young men are to be recruited into family practice, we must build for them a clinical and academic specialty in which research is being done, and in which they can attain significant qualifications.

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condition in only 44 years . . .**

# THE NEBRASKA STATE MEDICAL JOURNAL

2430 Lake Street, Lincoln 2, Nebraska

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JUNE, 1965

VOL. 50, NO. 6

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Illustrations should be numbered and their locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be in black (India ink) on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

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and stabilize the  
intestinal flora**

**for fever blisters  
and canker sores  
of herpetic origin**

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No untoward side effects have been reported in 12 years of clinical use.

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(1) Frykman, H.M.: *Minn. Med.*, Vol. 38, Jan. 1955. (2) Poth, E.J.: *The J.A.M.A.*, Vol. 163, No. 15, April 13, 1955. (3) McGivney, J.: *Texas State Jour. of Med.*, Vol. 51, No. 1, Jan. 1955. (4) Stern, F. H.: *Jour. of The Amer. Ger. Soc.*, Vol. 11, No. 3, Mar. 1963. (5) Weekes, D. J.: *N.Y. State Jour. of Med.*, Vol. 58, No. 16, Aug. 1958. (6) Abbott, P.L.: *Jour. of Oral Surg., Anes. & Hosp. Dental Serv.*, Vol. 18, July 1961. (7) Weekes, D. J.: *E.E.N.T. Digest*, Vol. 2, No. 12, Dec. 1963.

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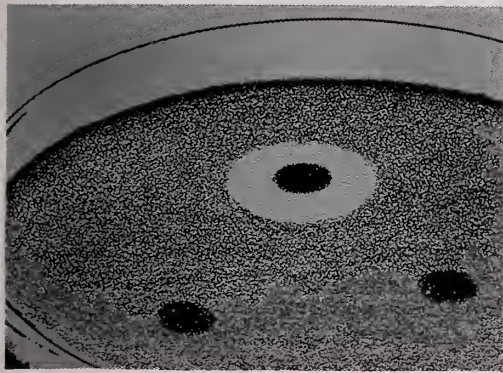
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Brand of

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**Indications:** Urinary tract infections caused by gram-negative and some gram-positive organisms.

**Side effects:** Mainly mild, transient gastrointestinal disturbances; in occasional instances, drowsiness, fatigue, pruritus, rash, urticaria, mild eosinophilia, reversible subjective visual disturbances (overbrightness of lights, change in visual color perception, difficulty in focusing, decrease in visual acuity and double vision), and reversible photosensitivity reactions. Marked overdosage, coupled with certain predisposing factors, has produced brief convulsions in a few patients.

**Precautions:** As with all new drugs, blood and liver function tests are advisable during prolonged treatment. **Pending further experience, like most chemotherapeutic agents, this drug should not be given in the first trimester of pregnancy. It must be used cautiously in patients with liver disease or severe impairment of kidney function.** Because photosensitivity reactions have occurred in a small number of cases, patients should be cautioned to avoid unnecessary exposure to direct sunlight while receiving NegGram, and if a reaction occurs, therapy should be discontinued. The dosage recommended for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Bacterial resistance may develop.

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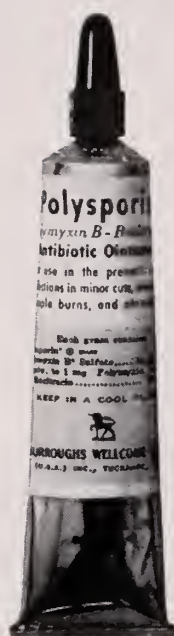
**How supplied:** Buff-colored, scored Caplets® of 500 mg. for adults, conveniently available in bottles of 56 (sufficient for one full week of therapy) and in bottles of 1,000. 250 mg. for children, available in bottles of 56 and 1,000.

**References:** (1) Carroll, G.: Urologists' Letter Club, June 1, 1964. (2) McDonald, D. F., and Short, H. B.: Address to the Fourth Interscience Conference on Antimicrobial Agents and Chemotherapy, New York, Oct. 26-28, 1964.

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**broad-spectrum antibiotic  
therapy with minimum risk  
of sensitization**

**Caution:** As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Contraindication:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

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### Current Comment

#### The Month in Washington—

A Registry of Tissue Reactions to Drugs is being established within the Armed Forces Institute of Pathology (AFIP) through the cooperation of the American Medical Association, the Pharmaceutical Manufacturers Association and the Food and Drug Administration.

The AFIP has the world's largest repository of pathological material for research and education, and the registry is expected to be a major addition to existing adverse drug reaction reporting programs.

"This unique cooperative effort for the benefit of the American public is the first between major drug manufacturing, drug prescribing and drug regulating bodies," said a joint statement issued by Dr. Jean Weston, Director of the AMA's Department of Drugs; Dr. Joseph Sadusk, FDA medical director, and Dr. Austin Smith, president of the PMA.

The purpose of the Registry will be to ob-

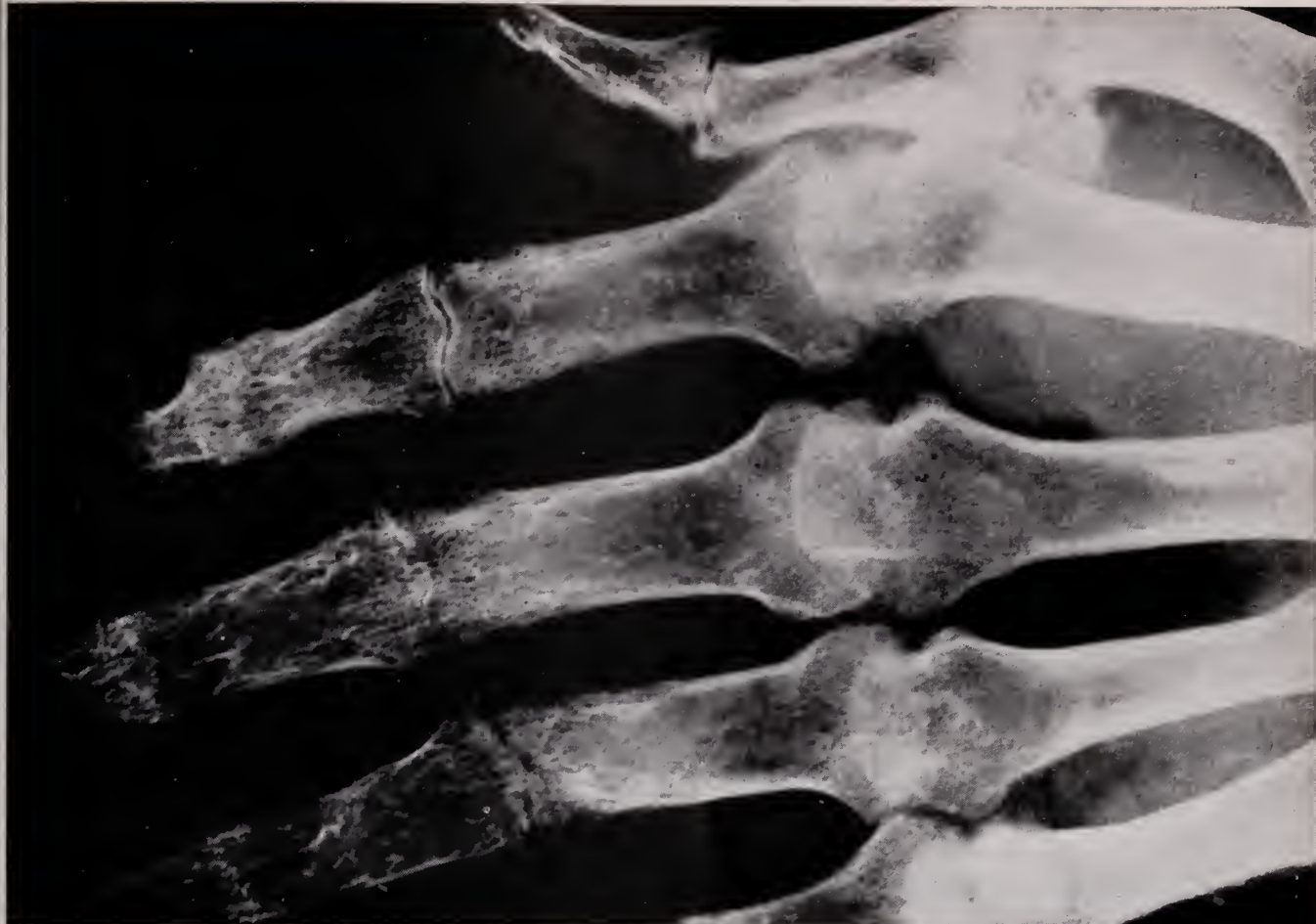
tain autopsy or biopsy tissue specimens from suspected adverse drug reaction cases. These specimens will be thoroughly studied by all methods available to a full-time pathologist, including consultation with other authorities in pathology and toxicology. Results of the studies will be reported to local pathologists who furnished the study material, and monthly summary reports will be made to each of the three sponsoring organizations. Important information obtained will then be disseminated to the medical community. The pathological material will remain on file at the Registry for future reference and study.

The Tissue Registry will augment the existing drug reaction reporting programs maintained by the AMA and FDA. The FDA at present receives reports of suspected adverse drug reactions from about 500 cooperating federal and military hospitals, and from 110 civilian hospitals under contract.

The AMA receives such reports from

(Continued on page 8-A)





## Butazolidin<sup>®</sup> brand of phenylbutazone

## in rheumatoid arthritis

**Geigy**

### Therapeutic effects

A number of workers have reported major improvement in 50-75% of cases, with some successful cases going into complete remission.

In responsive cases, improvement is generally seen within a week, so that trial therapy need seldom be continued beyond this period. Alleviation of pain is followed quickly by improvement of function and resolution of effusion or other signs of active inflammation. Relief of arthritic symptoms is quite frequently accompanied by increased appetite, gain in weight and an improved sense of well-being.

The initial response is usually maintained without dosage increases; indeed, initial dosage is often reduced for maintenance purposes.

Salicylate or steroid therapy can usually be diminished or, in some instances, eliminated.

Psoriatic arthritis responds in the same way as rheumatoid arthritis but the skin lesions are usually not affected either favorably or adversely by treatment.

### Precautions

Before prescribing, the physician should obtain a complete history and perform a complete physical and laboratory examination, including a blood count.

The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools.

If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time.

### Side effects

The most common side effects are nausea, edema and drug rash. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug.

### Contraindications

These include: edema, hypertension, or danger of cardiac decompensation; his-

tory or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when other potent chemotherapeutic agents are given concurrently because of the increased possibility of toxic reactions; when the patient cannot be seen regularly; when the patient is senile.

*Note:* The physician should be fully aware of dosage, precautions, side effects and contraindications as contained in the complete prescribing information.

### Butazolidin<sup>®</sup> alka

Each capsule contains:

|                              |          |
|------------------------------|----------|
| phenylbutazone               | 100 mg.  |
| dried aluminum hydroxide gel | 100 mg.  |
| magnesium trisilicate        | 150 mg.  |
| homatropine methylbromide    | 1.25 mg. |

**Butazolidin<sup>®</sup> brand of phenylbutazone**  
Tablets of 100 mg.

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Division of Geigy Chemical Corporation  
Ardsley, New York  
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## The Month in Washington—

(Continued from page 6-A)

physicians in private practice, a number of hospitals not reporting to FDA, and other sources.

Information is exchanged by the FDA and AMA, catalogued by data-processing techniques, and filed by data-processing machines. The data are then available for use in identifying drugs possibly associated with adverse reactions, in assisting physicians to diagnose possible adverse drug reactions, and in scientific investigations.

Establishment of the Tissue Registry was originally proposed by the Drug Research Board of the National Academy of Sciences-National Research Council. Twenty-eight such Registries already exist as joint activities of the Armed Forces Institute of Pathology and sponsoring professional societies. Collectively, the Registries are known as the American Registry of Pathology.

The parent Armed Forces Institute of Pathology, which is more than 100 years

old, serves as a central laboratory of pathology for the Department of Defense and has become a center of research, teaching and consultation not only for the military but for civilian groups. AFIP offices and laboratories are in an eight-story building at Walter Reed Army Medical Center.

The cost of the Tissue Registry is being borne equally by each of the three sponsors. In its first full calendar year of operation (1966), the cost of operation and administration is expected to be about \$100,000. The fund will be administered by the Universities Associated for Research and Education in Pathology, Inc.

In another development in this field, the U.S. delegation proposed at the World Health Organization Assembly in Geneva, Switzerland, that there be a worldwide warning system against drugs with adverse effects.

In commending the proposal, which was recommended by the HEW department, President Johnson said:

(Continued on page 12-A)



## There are few “nots” in Miltown therapy

■ Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.

■ The high safety-efficacy ratio of ‘Miltown’ has been demonstrated by more than a decade of clinical use.

**Indications:** ‘Miltown’ (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, ‘Miltown’ fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

**Contraindications:** Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

**Precautions:** Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side effects:** Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

**Usual adult dosage:** One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

**Supplied:** In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

*Before prescribing, consult package circular.*

# Miltown<sup>®</sup>

(meprobamate)

 WALLACE LABORATORIES / Cranbury, N.J.

Whether it is X-Ray Equipment or X-Ray Supplies, or accessories such as, cassettes and intensifying screens, developing tanks, illuminators, hangers, loading bins, dark room lamps, interval timers, x-ray film and processing chemicals, The K & W X-Ray Company can promptly supply, and at sensible prices.

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SUPPLY COMPANY**

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AUTHORIZED CONTRACT AGENT

## The Month in Washington—

(Continued from page 8-A)

"The expansion of this into an international system would be of direct benefit to the American people since it would include the monitoring of adverse reactions throughout the world.

"This is one of the many instances in international technological cooperation where everybody gains and no one loses."

Congress has approved legislation authorizing more than \$100 million to finance a three-year extension of a program of federal aid to community health services, including immunization programs against polio and measles.

The American Medical Association supported the provisions for immunization programs and most other features of the legislation.

Included in \$11 million a year earmarked for immunization is a new program to inoculate 20 million pre-school children against measles. Aid to states and local communities for immunization programs against polio, diphtheria, tetanus and pertussis also will continue.

Other features of the legislation are:

- \$3 million a year for a program of health services for domestic migrant workers and their families.
- \$50 million to continue for one more year a program of general federal aid to communities to enable them to establish and maintain adequate public health service.
- \$10 million to continue for one more year a program of federal grants designed to encourage the development of new or improved methods of providing health services outside the hospital.

The House Commerce Committee extended the last two features for only one year because they are both under review by the public health services with a view toward possible changes.

Wilbur J. Cohen, a longtime advocate of health care for the aged under social secur-

(Continued on page 14-A)





# TUBERCULIN, TINE TEST

(Rosenthal) Lederle

**ideally suited for routine screening**

**accurate**—comparable to the older standard intradermal tests

**practical**—can be administered by nurses under physician supervision

**convenient**—no refrigeration or other storage precautions

**economical**—stable for 2 years, self-contained disposable unit

Side effects are possible but very rare: vesiculation, ulceration or necrosis at test site. Contraindications, none; but use with caution in active tuberculosis. *Available* as the new individually-capped unit, boxes of 5, or in cartons of 25.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



9635-5

#### The Month in Washington—

(Continued from page 12-A)

ity, has been promoted to Under Secretary of Health, Education and Welfare.

Cohen, 51, has been Assistant HEW Secretary for legislation since 1961. The post made him the Administration's chief lobbyist for medicare. Playing mainly a behind-the-scenes role, Cohen long has worked for social security financing of health care for the aged.

At one time, he was director of the social security research and statistics division.

He succeeded Ivan A. Nestingen, who resigned, as HEW under secretary.

#### Mental Health—

Sigmund Freud said that mental health called for two essentials: the ability to love and the ability to work. Harry Levinson, a psychologist with the Menninger Foundation, tells of Albert Einstein's formula for mental health. Einstein said:

1. Take a good honest look at yourself. If you are unwilling to work consistently and hard at a different job, then be content with the one you have. (Note: Einstein turned down the presidency of Israel because he knew he did not fit the job.)
2. Have someone to talk to and turn to him freely. He need not necessarily be a professional person, but he should be someone who can respect your most personal feelings and keep a confidence. But do not make the mistake of just unloading on the next man. People are willing to hear and talk over your problems if you act on them, but nobody wants to be victimized by being made someone's emotional wastebasket.
3. Lay out a time budget so you require yourself to share in a range of interesting and pleasurable activities — including your family, friends, recreation, hobbies. Do not kid yourself about this, like going on a diet to—

(Continued on page 16-A)

## Hygroton®

brand of  
chlorthalidone

the long-acting  
diuretic

**Indications:** Many types of edema involving retention of salt and water.

**Contraindications:** Hypersensitivity and most cases of severe renal or hepatic disease.

**Precautions:** Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

**Side Effects:** Agranulocytosis, constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, impotence, leukopenia, muscle cramps, nausea, postural hypotension, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.

**Average Dosage:** One tablet (100 mg.) daily with breakfast.

**Availability:** Tablets of 100 mg. in bottles of 100 and 1000.

For full details, see the complete prescribing information.

\*Dorhout Mees, E.J., and Geyskes, G.G.: Acta med. scandinav. 175:703, 1964.

**Photos:** A 59-year-old woman with hypertensive cardiovascular disease and edema resistant to low-salt diet and bed rest. The patient lost 8½ lbs. in one week with a single tablet daily of Hygroton, brand of chlorthalidone.



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#### Mental Health—

(Continued from page 14-A)

morrow. By the time tomorrow comes you may be too old to indulge in a lot of things.

4. Save a little time for doing something personal for someone else. Most people need a positive gesture from another human being more than anything else in life. Find a way to reach out to another human being, preferably someone who is lonely, perhaps handicapped in some way, and who even may have lost hope.
5. Take your share of responsibility — for community, church, neighborhood, schools. Being an adult means being responsible.
6. If, despite your best efforts, you still cannot form gratifying ties with others, or take pleasure in living, or succeed in your work in keeping with your talents, then it is time to see a professional for help. To procrastinate is to waste your years.

Life is short. It is to be lived. He who has good mental health lives it in the fullest, and he who lives it enjoyably has good mental health. He who does not, wields his disappointment as a weapon of anger against himself and those unfortunate enough to be around him. (*Think*, March-April, 1965).

#### Unorthodox Cancer Therapy—

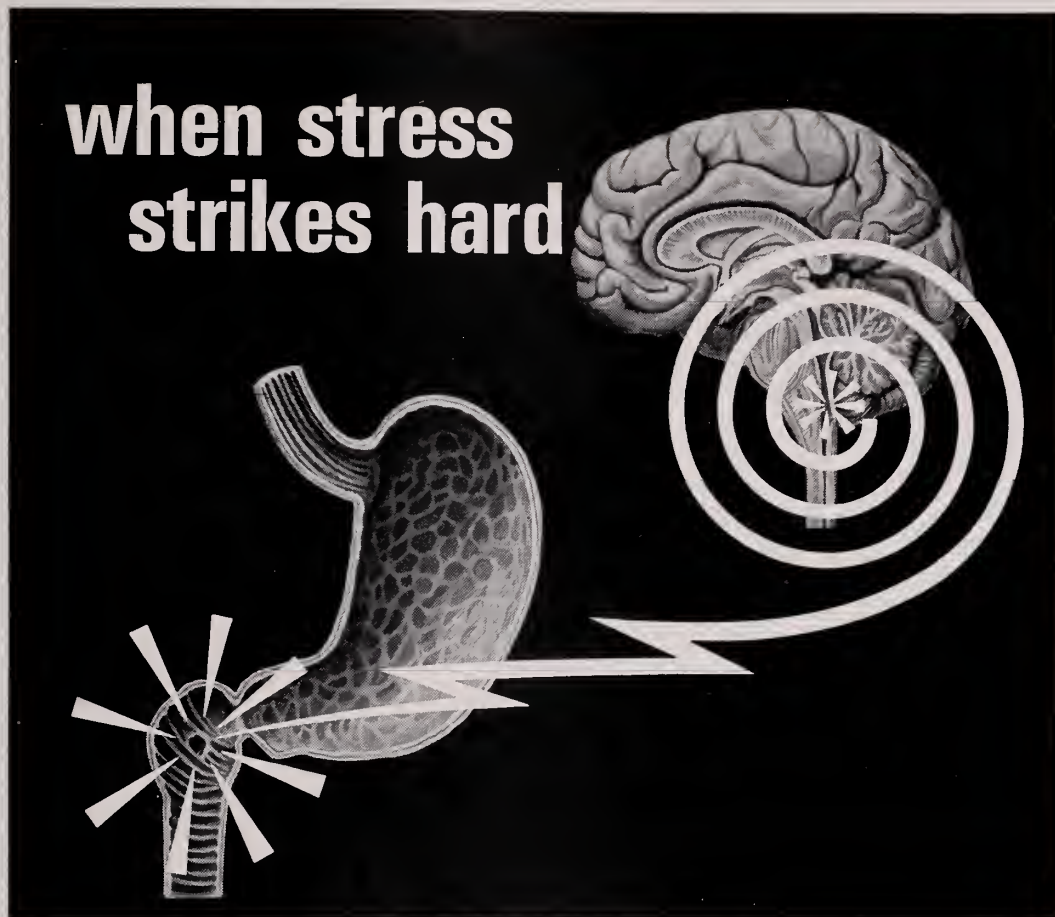
"Quackery might be described as the world's second oldest profession" according to L. Henry Garland, MD. Dr. Garland spoke at a recent National Congress on Medical Quackery sponsored by the AMA and the Food and Drug Administration.

Recognition of the charlatan is aided by noting the following:

1. His treatment is usually secret, or its method of preparation is secret, or it is available only from himself.
2. He uses advertising, planted stories, or "testimonials" to support his claims —

(Continued on page 20-A)

# when stress strikes hard



## PRO-BANTHINE<sup>®</sup> with DARTAL<sup>®</sup>

Each tablet contains: propantheline bromide (15 mg.) and thiopropazate dihydrochloride (5 mg.)

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Pro-Banthine, as expected, reliably moderates excesses of gastric secretion and gastrointestinal motility.

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With Dartal (thiopropazate dihydrochloride) extrapyramidal and parasympatholytic symptoms have been reported and, rarely, leukopenia, erythematous skin reaction and allergic purpura. Do not administer to patients under the influence of alcohol, barbiturates or narcotics and use cautiously with sedatives, in epileptic or depressed patients or in those with liver damage. Reactions typical of phenothiazines may occur.

*Dosage:* One tablet three times a day.

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## Unorthodox Cancer Therapy—

(Continued from page 16-A)

not reports in current, reputable, scientific journals.

3. He often uses the name of a high-sounding research organization or foundation.
4. He discourages or refuses consultation with reputable local physicians, claiming that the "medical trust" is against him.
5. His records are scanty or non-existent.
6. Many of his "cured" cases have no evidence of having had cancer when he treated them. He discounts biopsy verification.
7. His chief supporters may be very distinguished statesmen, actors, writers, lawyers, or even doctors — but not persons experienced in the natural history of cancer or the care of patients with that disease.
8. Following representations by the press or by legal authorities, he usually promises to make some of his agent available to an official health agency or medical commission for adequate trial. But he seldom delivers the promised drug or drugs, making a series of excuses, such as the fact that there is great expense in producing the drug, or a lack of supplies of the basic ingredients at the moment. If and when it finally becomes available, the method of administering the drug becomes complex and so personalized that virtually only the proponent can administer it effectively. (*The New Physician*, March, 1965).

## Bias, the Achilles Heel of the Therapeutic Trial—

An editorial in the April 29, 1965 issue of *The New England Journal of Medicine* tells of two recent papers published in the *JAMA* reporting almost directly opposite results in therapeutic trials in muscular dystrophy. The editor then asks, "How can

such frustrating contradictions arise?" He then tells of possible errors in the design of the experiments, and concludes that "Operation of any or all of these factors could yield contrasting results, but when they were compounded by unavoidable bias, the results were almost predictable.

He states, "There is much to be said for avoidance of premature release of results based upon inadequately controlled studies. This is owed to one's patients and colleagues. The multiple-center study of a drug in a competently designed experiment will tend to smooth out many of the rough spots, although the old nemesis, bias, may still operate even in this context. The best defense against bias is a constant awareness of its presence. (*The New England Journal of Medicine*, April 29, 1965).

## Aviation Accidents—

With general aviation accident deaths still averaging more than two a day, the Federal Aviation Agency focused its attention last month on the man who flies the airplane and the man who teaches him. George S. Moore, Director of the F.A.A. Flight Standards Service, stated: "Too many pilots have allowed a case of 'get-home-itis' to influence sound judgment when facing adverse weather conditions or suffering from fatigue." Moore said that in 1964 faulty flying technique accounted for more than 53% of total accidents with "continued flight into adverse weather" a factor in 141 accidents. As could be expected, the amateur pilot is involved in far more accidents than the professional. Also the more flying hours a pilot has accumulated in the preceding 90 days, the safer he is to fly with. Another factor causing accidents is alcohol. A good rule to follow is "If you drink, don't fly. If you fly, don't drink." (*F.A.A. Aviation News*, April, 1965).



DOCTOR — Please take each copy of your *Journal* home. The wives complain that they never get to read the Auxiliary column.





# THE NEBRASKA STATE MEDICAL JOURNAL

2430 Lake Street, Lincoln 2, Nebraska

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JULY, 1965

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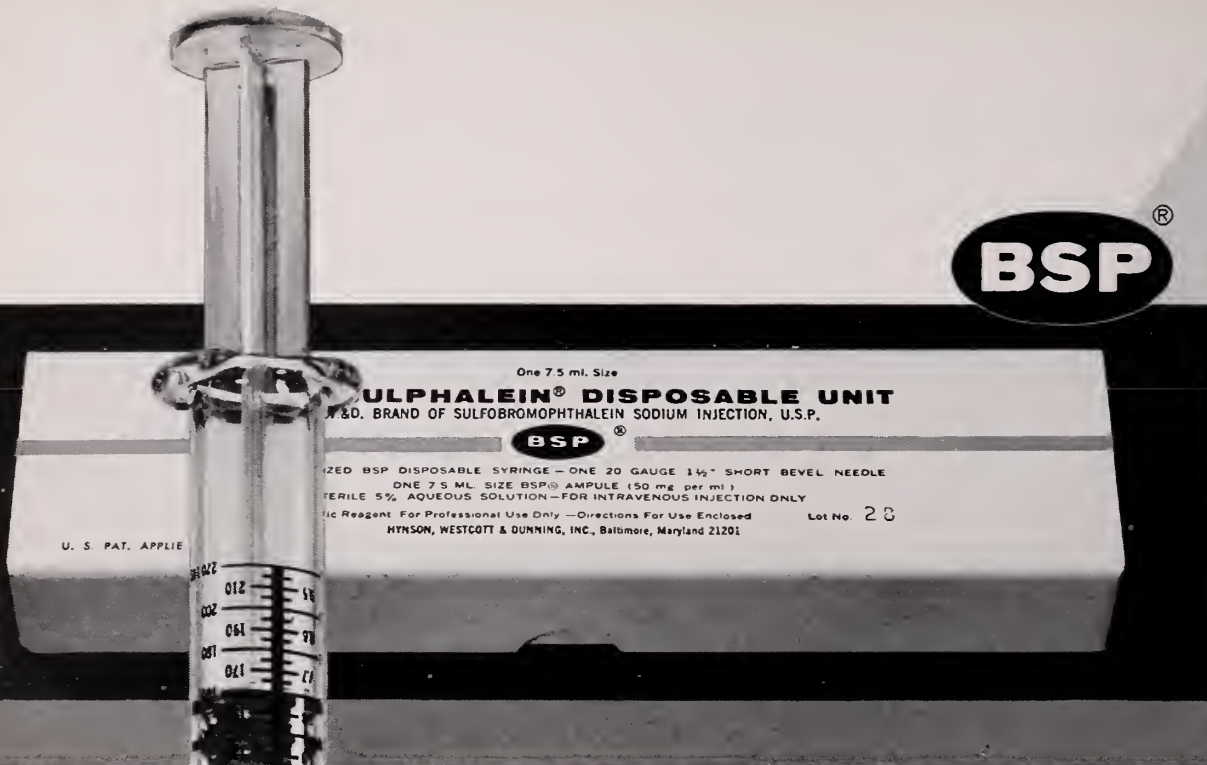
Illustrations should be numbered and their locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be in black (India ink) on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

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a summer hazard  
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## Current Comment

### The Predictive Value of Blood Cholesterol For Coronary Artery Disease—

L. M. Hurxthal, MD, and colleagues reported a follow-up study of 1674 patients followed for 20 to 30 years by the Lahey Clinic. Using a basic assumption that a cholesterol level of over 200 mg per 100 ml was "abnormal," they found that patients with abnormally high cholesterol levels did indeed show an increased frequency of coronary artery disease. From the mortality standpoint, there was an estimated 20 per cent increased mortality in males and 35 per cent mortality in females. (Geriatrics, June, 1965).

### Blowtorch Surgery—

A surgeon and a physicist have joined forces to develop a new kind of surgical instrument — a "plasma arc scalpel" which cuts with a jet of ionized gas. The surgeon is R. F. Shaw, MD, of the Institute of Medical Sciences at the Presbyterian Medical Center in San Francisco, and the physicist is Charles Sheer, of Columbia University's School of Engineering and Applied Science.

The plasma of the scalpel, Dr. Sheer points out, refers to a fourth state of matter which exists, for example, in the tails of comets, in the sun and the stars. (The other three states of matter are solid, liquid and gas). Since plasmas contain electrical charges, scientists can form them into precisely controlled and regulated jets. Dr. Sheer has developed plasma generators operating at 20,000 degrees F, capable of slicing concrete and as bright as the surface of the sun.

The cutting power of the surgical scalpel is expected to be so great that it will seal body tissues instantly, as they are cut, thereby preventing bleeding. At present, bleeding control may take up as much as 85 per cent of a surgeon's operating time; a jet scalpel should cut this time considerably and increase safety conditions significantly. It may also enable surgeons to extend operations into such regions as the liver, where the dangers of uncontrolled hemorrhage are great. (Think, March-April, 1965).

## Hygroton®

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chlorthalidone

the long-acting  
diuretic

**Indications:** Many types of edema involving retention of salt and water.

**Contraindications:** Hypersensitivity and most cases of severe renal or hepatic disease.

**Precautions:** Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

**Side Effects:** Agranulocytosis, constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, impotence, leukopenia, muscle cramps, nausea, postural hypotension, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.

**Average Dosage:** One tablet (100 mg.) daily with breakfast.

**Availability:** Tablets of 100 mg. in bottles of 100 and 1000.

For full details, see the complete prescribing information.

\*Dorhout Mees, E.J., and Geyskes, G.G.: Acta med.scandinav. 175:703, 1964.

Photos: A 59-year-old woman with hypertensive cardiovascular disease and edema resistant to low-salt diet and bed rest. The patient lost 8½ lbs. in one week with a single tablet daily of Hygroton, brand of chlorthalidone.



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Stress Formula Vitamins **Lederle**



#### Each capsule contains:

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| Vitamin B <sub>1</sub> (Thiamine Mononitrate) | 10 mg.  |
| Vitamin B <sub>2</sub> (Riboflavin)           | 10 mg.  |
| Niacinamide                                   | 100 mg. |
| Vitamin C (Ascorbic Acid)                     | 300 mg. |
| Vitamin B <sub>6</sub> (Pyridoxine HCl)       | 2 mg.   |
| Vitamin B <sub>12</sub> Crystalline           | 4 mcgm. |
| Calcium Pantothenate                          | 20 mg.  |

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.



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## Current Comment

### Polyvalent Influenza Vaccination in the Aged—

During influenza epidemics 50 to 80 per cent of deaths have occurred in persons over 65 years of age. For example, during the first wave of Asian influenza in this country, between October and December 1957, more than 39,300 deaths attributed to this disease were recorded. Of this number 32,800, or over 83 per cent, occurred in persons over 45 years of age and 22,400, or over 58 per cent in persons over 65 years of age. Similarly, during the second wave in January to March 1958, 18,700 of the 20,000 deaths occurred in the over 45-year age group and 13,400, or 67 per cent, in those over 65. In the 1960 epidemic between January and March, 80 per cent of the deaths occurred in the 65-year-or-over age group. These figures may seem paradoxical when one considers that viral infections in general, and influenza in particular, are less common in older than in young people. Thus, although on a numerical basis elderly patients have a considerably lower incidence of influenza

infections, the high mortality emphasizes the importance of employing measures to prevent infection.

Samuel Saslaw, MD, Professor of Medicine at the Ohio State University, offers the following recommendations for a vaccination program in elderly people:

1. In persons not vaccinated during or since 1957, 1 ml is given subcutaneously in September or October. A booster of either 1 ml subcutaneously or 0.1 ml intradermally is given in December.
2. Persons having had annual vaccination during or since 1957, but not in the past three or four years, receive 1 ml subcutaneously.
3. Persons vaccinated during or since 1957 and with vaccination annually during the past two or three years receive either 0.5 or 1 ml subcutaneously or 0.1 intracutaneously.
4. If a booster in any of the 3 groups is indicated three or four months after vac-

(Continued on page 16-A)

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**Precautions:** Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side effects:** Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

**Usual adult dosage:** One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

**Supplied:** In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

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Box 1109, Madison, Wisconsin 53701

#### Polyvalent Influenza Vaccination in the Aged— (Continued from page 10-A)

cination, or if an epidemic is imminent due to a strain contained in the vaccine, 0.1 ml may be given intracutaneously with results comparable to 0.5 or 1 ml subcutaneously.

5. In times of critical vaccine shortage, the administration of 0.1 ml intracutaneously is recommended for an elderly population. (Geriatrics, June, 1965).

#### Splinter Hemorrhages — Their Clinical Significance—

Subungual splinter hemorrhages are generally considered to be part of the clinical picture of bacterial endocarditis, but the fact that they are also seen in a wide variety of other conditions has been appreciated only recently, according to Doctor Z. M. Kilpatrick and colleagues in the University of Texas Southwestern Medical School in Dallas, Texas.

They examined 574 patients admitted to Parkland Memorial Hospital's medical service and found splinter hemorrhages in 59 patients. In all of these 59 patients the pres-

ence of subacute bacterial endocarditis was virtually ruled out by the results of blood cultures. Many varied and unrelated disease states were found in patients with splinter hemorrhages, with cardiovascular, renal, and pulmonary disease and diabetes mellitus accounting for over 70 per cent of the cases. Peritoneal dialysis was the single most frequently encountered factor, apparently being noted in 8 cases. No correlation could be demonstrated between bleeding and clotting disorders. (Archives of Internal Medicine, June, 1965).

#### Aviation Medicine (Flicker Vertigo)—

According to legend, Roman slave merchants painted a white mark on a potter's wheel and forced slaves to sit on a wood stool and stare at the turning disc. Some became violently ill, but those who could endure the stroboscopic effect for a certain period of time with no physical discomfort were considered first class specimens who brought a higher price on the market.

Some pilots and passengers experience a similar sensation from flickering lights caused by helicopter rotorblades, the rotation of an idling propeller or the intermittent flashing of an aircraft anticollision beacon reflecting from clouds. The sensation can cause discomfort including nausea and even epileptic-like seizures. Severity of the attack has been found to be dependent upon frequency and intensity of the flash and individual susceptibility. In a study of 102 Navy helicopter pilots, the alertness of one-fourth was impaired by the effect of sunlight chopped by helicopter rotor blades or light from a rotating beacon reflected from clouds. Another report indicated one pilot actually lost consciousness while landing into the sun with the propeller idling. This phenomenon has also been observed when flickering television sets have induced similar symptoms in some viewers, particularly children. The aviation community has been aware of the problem for years and the users of rotating beacons have been cautioned against the dangers involved.

FAA's Civil Aeromedical Research Insti-

(Continued on page 20-A)



### **LOMOTIL—Pharmacologic Activity.**

The significant pharmacologic actions of Lomotil are summarized as follows:

Evidence indicates that Lomotil acts directly on the intestinal musculature to inhibit excess peristalsis.

Lomotil is not known to inhibit nonpropulsive intestinal movements.

Roentgenograms demonstrate that this activity occurs within two hours after oral administration and persists for at least six hours.

Comparative studies in the rat show Lomotil to be more effective in inhibiting fecal excretion than either codeine or morphine.

Analgesic, anticholinergic, mydriatic and gastric secretory effects have not been significant.

Reduction of propulsive motility with Lomotil relieves spasm and cramping, allows physiologic absorption of fluid and reduces frequency of evacuations to provide prompt, symptomatic control of virtually all diarrheas.

# LOMOTIL<sup>®</sup> tablets liquid

Each tablet and each 5 cc. of liquid contains:

diphenoxylate hydrochloride ..... 2.5 mg.

(Warning: May be habit forming)

atropine sulfate ..... 0.025 mg.

**slows propulsion • relieves distress • stops diarrhea**



**Precautions:** Lomotil is an exempt narcotic preparation of very low addictive potential: more than three million prescriptions have now been written for Lomotil. Recommended dosages should not be exceeded. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates.

**Side Effects:** Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia.

**Dosage:** For full therapeutic effect — Rx full therapeutic dosage. The recommended

initial daily dosages, given in divided doses, until diarrhea is controlled, are:

#### **Children:**

3 to 6 months—3 mg. (½ tsp.\* t.i.d.)  
6 to 12 months—4 mg. (½ tsp. q.i.d.)  
1 to 2 years—5 mg. (½ tsp. 5 times daily)  
2 to 5 years—6 mg. (1 tsp. t.i.d.)  
5 to 8 years—8 mg. (1 tsp. q.i.d.)  
8 to 12 years—10 mg. (1 tsp. 5 times daily)

**Adults:** 20 mg. (2 tsp. 5 times daily or 2 tablets 4 times daily) \*Based on 4 cc. per teaspoonful.

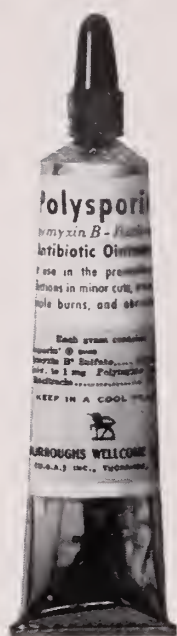
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### Aviation Medicine (Flicker Vertigo)—

(Continued from page 16-A)

tute (CARI) in Oklahoma City is now taking a deep look into the problem. The CARI tests are much more elaborate than the old potter's wheel test. Doctors measure eye movements, up and down and also side to side. Electroencephalograph recordings are taken. The present tests incorporate a rotation of 90 flashes per minute. Final results of the current testing program should be available early next year. (FAA Aviation News, May, 1965).

### Vermont Rabies Epidemic—

Vermont newspapers in the last few months have featured numerous reports of rabies in the fox population and in other animals. Eighteen cases have been found already this year, prior to April 15, including 15 foxes, a dog, a cow, and a skunk. Directives have been sent to all Forest and Park Department personnel advising voluntary immunization of those working in areas of high incidence. At a meeting held on March 9, in Hardwick, the following

excellent description of rabies and an analysis of the problem was given by N. W. Hudson of the Soil Conservation Service:

"There is a reservoir of rabies in the wild-life population that periodically builds up to epidemic proportions. When this occurs, the rabid wild animals lose their fear of their natural enemies, including man, and will attack anything without provocation. Foxes and skunks are the most common carriers. Foxes range over a wider area and are considered the principal means of spreading the disease. Of the domestic animals, dogs are most often affected. In the "dumb" form, the animal first shows signs of paralysis in the throat. The lower jaw drops and there is profuse drooling. They soon become completely paralyzed, show coma, and die in a few hours.

"Animals with 'furious' rabies become irrational and viciously aggressive. They roam about aimlessly and will attack any moving object. They lose all caution and fear of natural enemies. Dogs especially

(Continued on page 22-A)

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## Vermont Rabies Epidemic—

(Continued from page 20-A)

will eat foreign objects, such as sticks or stones. At this stage there is no paralysis. Later, dogs will return home, seek seclusion and die in two or three days. Although these are classic symptoms, they are not the only ones. Symptoms may be as simple as indigestion or choking. The animal may appear to be injured or poisoned. In all cases there is a change in 'personality' or behavior pattern. Cows may develop a sway in their walk. The hindquarters will become numb, and the tail paralyzed. Milk production ceases.

"Any animal, wild or domestic, that shows abnormal behavior should be avoided. The virus is usually present in the saliva. Although the usual way of transmittal is by bite, infection can be spread by the saliva entering a cut or break in the skin. When handling sick or dead animals, one should wear gloves and avoid the area of the head.

"If a person is bitten there are three things that he should do.

1. Cleanse the wound immediately and as thoroughly as possible. Warm water and soap are recommended but plain water would be better than nothing.
2. See a doctor — the sooner the better. He will probably do additional cleansing and may wash the wound with anti-rabies serum. There is a good chance he will start on the 'Pasteur' treatment which consists of daily injections of vaccine for from 14 to 21 days.
3. Have the animal confined for observation with a veterinarian or the Humane Society if the animal can be found.

"Although the usual incubation period is from 15 to 40 days, it may be as long as six months to a year from the time of infection to the time when symptoms appear. There is immunization available for humans that consists of a series of vaccinations over a period of several months followed by 'booster' shots yearly. The vaccine costs

(Continued on page 24-A)





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### Vermont Rabies Epidemic—

(Continued from page 22-A)

about \$18.00, plus the cost of the administration. Anyone who is likely to come in contact with rabid animals might well consider this program.

"Control of rabies consists of several steps. The most important is the vaccination of all dogs and the elimination of all strays. If, however, an immunized dog is bitten by a rabid animal, he should have a booster shot within five days and be confined for observation for 10 days. Since foxes appear to be the worst offenders in carrying the disease, their numbers must be drastically reduced. In other outbreaks, control was not attained until 85 per cent of the foxes had been killed.

"For persons working in the area of known infection and who may come in contact with rabid animals, serious consideration should be given to immunization. It is effective and much less painful than the 'Pasteur' treatment." (The New England Journal of Medicine, 10 June 1965).

### New Professions in the Paramedical Fields—

Did you know that Music Therapists are now employed in several of our Nebraska State Hospitals? To become a Registered Music Therapist a student must take a special curriculum with courses in physiology and abnormal psychology and must be able to teach patients how to sing as well as how to play any given instrument (including the guitar — which is very popular with patients these days). After the second or third year in college students are required to work in a hospital as an orderly or nurses' aide in order to "get a feeling for the hospital environment," and after their formal education they must take a six-month's internship in an approved hospital. There is no shortage of jobs in this area.

Another new field is the profession of Inhalation Therapy. These schools are also limited in number. One year of college work is required followed by two years of study in a school for inhalation therapists. Graduates are usually employed by hospitals and are given the responsibility for treating in-patients as well as out-patients with such modalities as Intermittent Positive Pressure Inhalation Therapy, with or without added medication, and for the administration of oxygen throughout the hospital.

### Malleolo-Stapedial Transposition in Middle Ear Surgery — M. Rubinstein (Tel-Hashomer Hosp, Tel-Hashomer, Israel), E. Korine, and A. Eviatar, Arch Otolaryng 80:38 (July) 1964.

Forty cases of chronic otitis media were operated on by the Malleolo-Stapedial transposition technique. The non-functioning incus was removed, and new contact between the malleus and stapes was established. In 35 cases, the hearing was improved, with an average gain of 26 decibels. The results remained unchanged during the two years' follow-up. The preoperative ear infection was controlled, and no labyrinthine damage occurred among the cases presented. According to the results obtained, the malleolo-stapedial transposition technique is considered a safe, reliable procedure in the surgery of middle ear diseases.

# THE NEBRASKA STATE MEDICAL JOURNAL

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Illustrations should be numbered and their locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be in black (India ink) on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

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(1) Frykman, H.M.: *Minn. Med.*, Vol. 38, Jan. 1955. (2) Poth, E.J.: *The J.A.M.A.*, Vol. 163, No. 15, April 13, 1957. (3) McGivney, J.: *Texas State Jour. of Med.*, Vol. 51, No. 1, Jan. 1955. (4) Stern, F. H.: *Jour. of The Amer. Ger. Soc.*, Vol. 11, No. 3, Mar. 1963. (5) Weekes, D. J.: *N.Y. State Jour. of Med.*, Vol. 58, No. 16, Aug. 1958. (6) Abbott, P.L.: *Jour. of Oral Surg., Anes. & Hosp. Dental Serv.*, Vol. 19, July 1961. (7) Weekes, D. J.: *E.E.N.T. Digest*, Vol. 25, No. 12, Dec. 1963.

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## Current Comment

### Hair Dryers for Ophthalmologists—

A hand-held hair dryer is the basis of an apparently effective treatment for Herpes simplex keratitis, a virus infection of the eye, according to Everett R. Veirs, MD, of the Scott and White Clinic in Temple, Texas. Once a herpes simplex infection is established in the eye it tends to recur, causing more permanent scarring of the cornea with each flareup. Until recently the most common treatment was to cauterize the involved cornea. Within the past several years an anti-viral drug, 5-iodo-2-deoxyuridine (IDU) has proven effective treatment in some cases. However, warm, dry air, applied to the eyes with a hand-held hair dryer may be more effective than either of the other methods according to Dr. Veirs. Laboratory tests indicate that the Herpes simplex virus is sensitive to heat about 50° C (132.8° F). Results at the Scott and White Clinic indicate that the virus is sensitive to heat in the eye as well. Dry air heated to 60 to 62° C (140 to 143.6° F) is directed

into infected eyes for 4½ to 5 minutes with a hair dryer. Laboratory studies suggest that the virus is most sensitive during its inactive stage. Used at the clinic since 1959, the treatment has proven superior to other methods in the number of patients who responded, in the shortened average duration of the disease, and in the reduced frequency of recurrences.

### Do You Want To Be An Astronaut?—

According to the psychiatric team headed by Captain Carlos J. G. Perry, MC, Chief of the Psychiatry Branch of the US Air Force School of Aerospace Medicine at Brooks Air Force Base, Texas, the top candidates for astronautical training had the following:

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2. Ability to handle aggressive feelings without apparent discomfort.
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## Current Comment

### Cataract Removal Best Delayed—

It may be wise to delay cataract removal in the newborn when the cataract results from maternal infection with rubella (German measles) according to John G. Bellows, MD, Associate Professor of Ophthalmology at the Northwestern University School of Medicine. Removal of a rubella-associated cataract may stir up an infection within the eye and lead to loss of the organ. In the past the lens of a baby's eye was removed very early if the child was born with totally opaque cataracts. However, recent reports have indicated that the rubella virus acquired before birth may still be active in the infant several months after birth. Cataracts associated with rubella are part of the "rubella syndrome" in the newborn, which also may include heart defects, changes in the long bones, and an enlarged liver and spleen.

### Nebraska Doctor Makes Discovery—

Women who are deficient in estriol, a female hormone, may be predisposed to breast cancer, according to Henry M. Lemon, MD, Director of the Eppley Institute for Research in Cancer, University of Nebraska College of Medicine. If this observation is confirmed, a form of substitution therapy may become possible. Dr. Lemon reported his findings at the Fifth Multidiscipline Research Forum of the American Medical Association, and he had an award-winning exhibit on display in the Scientific Exhibit Section in the Coliseum. He found evidence of hormonal imbalance in the urine of breast cancer patients. When he measured the urinary excretion ratio of estriol in comparison with two other estrogenic hormones—estrone and estradiol—he discovered that the excretion ratio of estriol was low in 17 of 24 (75 per cent) untreated breast cancer patients but in only 9 of 30 (30 per cent) noncancerous women. Of 50 breast cancer patients who underwent removal of the ovaries or some form of hormonal therapy, only 12 (25 per cent) excreted subnormal estriol quotients. Furthermore, the 10 women of this group whose cancers re-

gressed after treatment also experienced a rise toward the normal urinary estriol quotient; no cancer regression was noted in patients continuing to excrete subnormal proportions of estriol. Ovariectomy removes the chief source of estradiol; hormonal therapy with various male or female hormones is usually aimed at altering the hormonal milieu of the frequently hormone-dependent cancers.

Estriol is the principal estrogen found in the urine of pregnant women and in the placenta. Estrone is the principal circulating hormone, from which estriol is produced in the body. Estradiol is the principal estrogenic hormone in the ovary. The latter two hormones, estrone and estradiol, are active in the nonpregnant woman, stimulating growth of the endometrium and causing other changes in the uterus during the monthly menstrual cycle. Estrone and estradiol also induce breast cancer in mice under appropriate experimental conditions, while estriol inhibits the carcinogenic action of the other two hormones, Dr. Lemon pointed out. These inhibitory and certain other activities of estriol suggest that it blocks estrone and estradiol at critical points in target organs. He added that a relationship of subnormal estriol excretion to breast cancer might explain:

—The extreme rarity of breast cancer during pregnancy, when estrogen secretion stimulating breast growth is maximal but when estriol production in the placenta also is maximal.

—The protective effect of pregnancy on subsequent breast cancer risk, in proportion to the number of completed pregnancies. The cumulative effect of multiple estriol-producing pregnancies would add up to years of protective effect.

—The predisposition of childless and infertile women to breast cancer.

—The decline in incidence of breast cancer after the menopause; estriol excretion quotients normally rise after menopause while the ovaries shrink.

(Continued on page 12-A)

### Nebraska Doctor Makes Discovery—

(Continued from page 11-A)

—The effectiveness of ovariectomy and hormonal therapy in advanced breast cancer. In Dr. Lemon's view, the fact that ovariectomy and hormonal therapy normalize estriol excretion quotients supports his hypothesis: that the mechanism of action of hormonal therapy of breast cancer is intimately related to hormonal imbalances which originally may have induced the cancer.

### Don't Offer Your Pilot a Martini—

Two investigators, J. L. Nettles, MD, and Robert N. Olson of McCoy Air Force Base in Florida, described an experiment designed to learn how alcohol influences a flier suddenly subjected to rapid decompression—as might happen if an airplane cabin suddenly decompressed while the craft was flying at 25,000 feet. In such an event, the pilot may have just a few seconds of useful consciousness in which to switch to emergency oxygen equipment. Anything that shortens this time of useful consciousness might mean the difference between life and death. They found that one martini produced an overall drop of 38 per cent in the time of useful consciousness at 25,000 feet. Alcohol in the blood after one martini ranged from 22 to 49 milligrams per cent, considerably less than the 150 to 200 mg per 100 ml usually accepted as the level of legal intoxication.

### Stop That Noise!—

Prolonged exposure to loud noise, in an industrial plant for example, can cause permanent loss of hearing, stated Aram Glorig, MD, Director of the Callier Hearing and Speech Center of Dallas, Texas. Fortunately, noise-induced hearing loss can be prevented, and like the conservation of any other human function this is a medical responsibility. He recommended the initiation of a hearing conservation program whenever persons have:

—Difficulty in communicating by speech while exposed to noise.

(Continued on page 15-A)

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\*Swartz, C., et al.: Circulation 28:1042, 1963.



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**Stop That Noise!—**

(Continued from page 12-A)

—Head noises or ringing in the ears after working in the noisy environment for several hours.

—A temporary loss of hearing that has the effect of muffling speech and other sounds after several hours of exposure to the noise.

In most industrial situations where injuriously loud noises exist, "sound conditioning" of walls and machines is not enough. Cotton in the ears is not enough. In these cases, hearing impairment due to noise must be prevented by the use of properly fitted and properly worn ear protectors.

**Why Bugs Bug Us—**

A number of factors increase the attractiveness of hosts to mosquitoes, reported A. W. W. Brown, PhD, Head of the Department of Zoology at the University of Western Ontario. The "attractive factors" include:

1. Convective heat (heat circulating

through air currents) from the "victim."

2. Atmospheric moisture (provided the temperature isn't too low).

(Continued on page 22-A)



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## Why Bugs Bug Us—

(Continued from page 15-A)

3. Steroid sex hormones, such as estriol, on the victim's skin.
4. Lack of reflectivity (visual dullness).

The concept that some people just aren't attractive to mosquitoes was confirmed in testing with human volunteers by a joint University of California and Stanford University Research Institute team. This team is now busy in trying to chemically isolate natural skin substances that are attractive to mosquitoes and others that are repellent.

I. H. Gilbert, MSc, of the Entomology Research Division of the Agricultural Research Service of the U.S. Department of Agriculture at Gainesville, Florida, stated that the "best" of the man-made mosquito repellents is "deet" — otherwise known as N,N-diethyl-m-toluamide. This can be applied to bare skin or to clothing.

## Lead Poisoning . . . Has It Disappeared?—

No, according to Harold Jacobziner, MD, Assistant Commissioner of the New York City Department of Health. He stated that

400 cases of lead poisoning occur in New York City each year. Most cases are discovered in areas of substandard housing where children are likely to come into contact with walls where the paint and plaster are peeling.



"I'll bet it wasn't a nurse who started that rumor that everybody loves a fat man!"





**Side effects and precautions:** The transitory drowsiness which may occur with hydroxyzine HCl usually disappears spontaneously in a few days with continued therapy, or is correctable by dosage reduction. Dryness of the mouth may be seen with higher doses. Involuntary motor activity has been reported in hospitalized patients on higher than recommended doses. Hydroxyzine HCl may potentiate CNS depressants, narcotics such as meperidine, barbiturates, and anticoagulants. In conjunctive use, dosage for these drugs should be decreased. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. **Parenteral Solution**

**Precautions and contraindications:** This dosage form is intended only for I.M. or I.V. administration and should not, under any circumstances, be injected subcutaneously or intra-arterially. When the usual precautions for I.M. injection have been followed, reports of soft tissue reactions have been rare. I.V. administration should be slow, no faster than 25 mg. per minute, and should not exceed 100 mg. in any single dose. Particular care should be used to insure injection only into intact veins; a few instances of digital gangrene occurring distal to the injection site have been attributed to inadvertent intraarterial injection or peria-  
arterial extravasation, both of which should be avoided. **More detailed professional information available on request.**

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## Current Comment

### Exercise? Who Me?—

William Dock, MD, Chief of the Medical Service at the Brooklyn (NY) Veterans Administration Hospital, pointed out that the inability of the aging heart to tolerate overload comes much sooner for sedentary people than for active persons who exercise vigorously. As the heart ages, there is:

- a decrease in the enzymes needed to maintain contraction
- an atrophy of the nervous elements
- an atrophy of the myocardium

Vigorous exercise, arrived at gradually and maintained daily, apparently prevents myocardial atrophy, permitting the heart to do its normal job and still have reserve to compensate for excess burdens or overloads,

such as might be imposed by hyperthyroidism or hypertension.

**Intraocular Pressure and Visual Fields: Effects of Corticosteroids** — A. E. Kolker, B. Becker (660 S. Euclid Ave., St. Louis), and D. W. Mills. Arch Ophthal 72:772 (Dec.) 1964.

Patients who demonstrated changes in glaucomatous field loss brought about by alterations in intraocular pressure are presented. Reversible field loss can occur when elevations of intraocular pressure are induced by topical steroids. If the steroids are discontinued before permanent damage is done, the visual fields return to pre-treatment levels as the pressures return to normal. In some instances, the field loss of primary open-angle glaucoma can be reversed by lowering intraocular pressure.

# THE NEBRASKA STATE MEDICAL JOURNAL

2430 Lake Street, Lincoln 2, Nebraska

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SEPTEMBER, 1965      VOL. 50, NO. 9

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## Current Comment

### DMSO — What Are the Facts?—

W. M. Carley, staff reporter for The Wall Street Journal, in an interesting feature article on the front page of August 11, 1965 edition, stated that the "gray market" use of DMSO (dimethyl sulfoxide) is becoming alarming.

Where is DMSO obtained? To find out what DMSO will do, six drug companies have been sponsoring research under license from Crown Zellerbach and the University of Oregon, the joint patent-holders. These companies are Schering Corporation, Syntex Corporation, Squibb, Merck Sharp and Dohme, American Home Products Corporation, and Geigy. Some of our Nebraska doctors have been participating in this research. However, other sources of supply are available. Syntex already has this product on the market in Mexico. Probably the easiest way to obtain some is to buy some of the industrial grade which is sold as a solvent in many paint stores and lumber yards. Earlier this year it was being offered to arthritic sufferers in New Jersey for \$3.50 an ounce, about 146 times its price to industrial customers. In Caldwell, Idaho, a chiropractor advertised DMSO treatments for arthritic patients at an unspecified price.

What is it? DMSO is produced as a by-product of paper making. It is a clear liquid with a garlic-like odor which penetrates the skin with amazing rapidity. Aside from its own possible therapeutic effect, some believe that DMSO can be used as a "piggy-back" carrier mixed with other drugs to carry them through the skin to hard-to-reach locations within the body. Merck Sharp and Dohme has been mixing it with some of the steroids. Other possible mixtures are limited only by one's imagination—insulin? digitalis?

How safe — or how dangerous — is it? This is the big question. And until much more research is done, the answer will not be known. W. M. Hearon, a Crown Zellerbach vice president, worries about the inadvertent mixing of DMSO with other agents. A housewife who used the drug

(Continued on page 10-A)

Indications: Many types of edema involving retention of salt and water.

Contraindications: Hypersensitivity and most cases of severe renal or hepatic disease.

Precautions: Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

Side Effects: Agranulocytosis, constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, impotence, leukopenia, muscle cramps, nausea, postural hypotension, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.

Average Dosage: One tablet (100 mg.) daily with breakfast.

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**Precautions:** Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may

# Miltown® (meprobamate)

possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side effects:** Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very

rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

**Usual adult dosage:** One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

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## DMSO — What Are the Facts?—

(Continued from page 6-A)

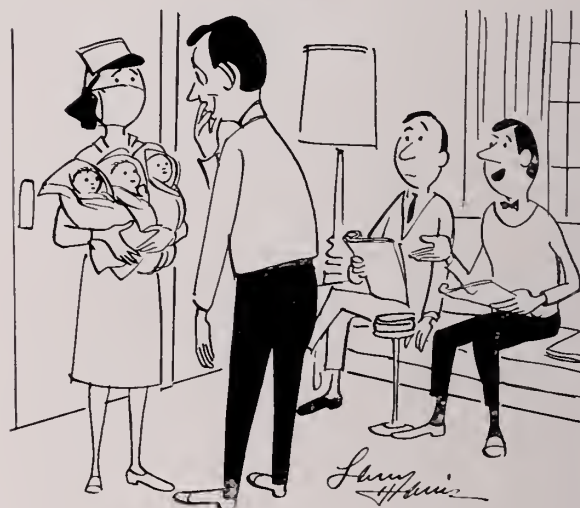
after spraying her garden with an insecticide might have some of the insecticide on her skin which could be carried into her body. "There could be a very toxic reaction," he says. He states that his company is doing what it can to police the five million pounds of industrial grade DMSO that it sells each year. Labels warn: "Not for drug use." The Food and Drug Administration's jurisdiction is limited to interstate traffic. It can't control DMSO manufactured and shipped for industrial use, and then diverted to medical use within the state. The states themselves can police the use of new drugs, but most of them have no active enforcement program.

## Watch That Date!—

Additional case reports keep appearing telling of the dangers inherent in the use of outdated tetracycline. Recently two more cases were reported of severe kidney disease occurring in patients who received old

tetracycline samples. One of these cases involved the 22-year-old sister-in-law of a physician. She had been given tetracycline from a sample supply that her brother-in-law had in his desk for at least six months. The second patient was the 26-year-old wife of a physician. Both of these patients

(Continued on page 22-A)



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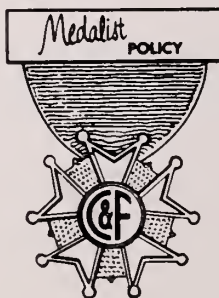
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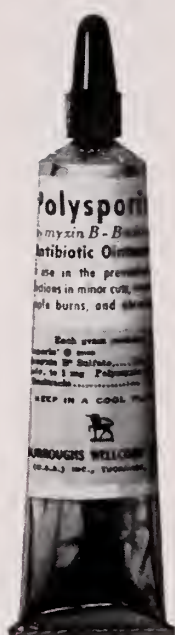
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Watch That Date!—

(Continued from page 10-A)

showed proteinuria, muscle weakness, and the biochemical abnormalities characteristic of an acquired Fanconi syndrome. Polydipsia and polyuria were prominent and seemed disproportionate to the glycosuria. The most striking feature of each case was the effects of potassium depletion, so severe in one of the patients that she still required potassium therapy a year after the onset of her illness. Tetracycline stored under extreme conditions of heat and humidity may also give rise to degradation products (epianhydrotetracycline and anhydrotetracycline) which may produce the toxic symptoms listed above, even though the product is not outdated. Both physician and patient should be aware of the necessity for discarding unused tetracyclines in keeping with the manufacturer's expiration date.

One wonders if it would not be helpful if the dispensing pharmacist would add to the prescription label the warning "Do Not Use After (date)....."



"Well, if we must fight it out with the cops this looks like as good a place as any!"



**Side effects and precautions:** The transitory drowsiness which may occur with hydroxyzine HCl usually disappears spontaneously in a few days with continued therapy, or is correctable by dosage reduction. Dryness of the mouth may be seen with higher doses. Involuntary motor activity has been reported in hospitalized patients on higher than recommended doses. Hydroxyzine HCl may potentiate CNS depressants, narcotics such as meperidine, barbiturates, and anticoagulants. In conjunctive use, dosage for these drugs should be decreased. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. **Parenteral Solution** **Precautions and contraindications:** This dosage form is intended only for I.M. or I.V. administration and should not, under any circumstances, be injected subcutaneously or intra-arterially. When the usual precautions for I.M. injection have been followed, reports of soft tissue reactions have been rare. I.V. administration should be slow, no faster than 25 mg. per minute, and should not exceed 100 mg. in any single dose. Particular care should be used to insure injection only into intact veins; a few instances of digital gangrene occurring distal to the injection site have been attributed to inadvertent intraarterial injection or periarterial extravasation, both of which should be avoided. **More detailed professional information available on request.**

## Current Comment

### First Aid Transparent Splints—

Plastic, inflatable tubes which serve as temporary splints and protective coverings for the arms or legs are apparently getting a welcome reception from many doctors. These tubes can also be used to control venous and arterial bleeding. They permit visual and X-ray examination of the extremities without disturbing the splint. Manufactured by Bauer and Black (Curity Immobil-Air Bandage), by Development, Inc. (QuickAid), and by Parke, Davis (ReadiSplint), they are available in six sizes: hand and arm, half arm, full arm, foot and ankle, half leg, and full leg.

However, a word of warning. When using these, the doctor must make sure that over-inflation does not impair blood supply to the injured extremity. The extremity should be checked every 10-15 minutes for discoloration and numbness, and the splint should be deflated as necessary. And remember, they are intended only for temporary use and should not be used to replace conventional plaster casts.



"He's improving. Notice how much more he's been finding wrong with me lately?"



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# THE NEBRASKA STATE MEDICAL JOURNAL

2430 Lake Street, Lincoln 2, Nebraska

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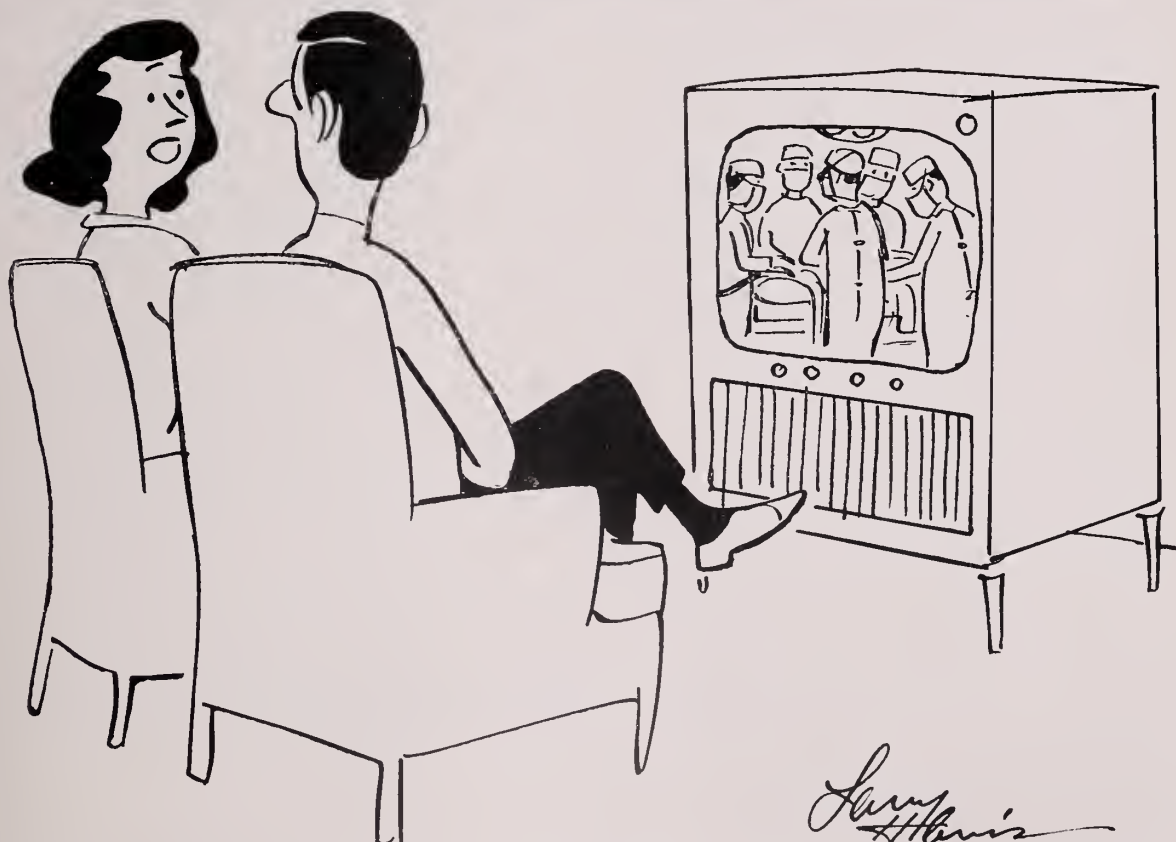
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*Larry Harris*

"I hear this show is being cancelled so I suppose they'll all have to go back to private practice."



## Current Comment

### Obesity Research Clinic—

Mary Jo Henn, MD, Assistant Dean of the University of Nebraska College of Medicine; Vernon Ward, MD, of Kearney; Robert Muffley, MD, of Omaha, and their associates in the Obesity Research Clinic at the University of Nebraska Hospital in Omaha have been getting favorable national publicity with regard to their work with patients "who gain weight while following diets that would mean starvation for most individuals."

Doctor Henn states that 27 metabolic defects have been discovered to date — defects which can account for failures of the usual weight reduction diet to be effective in approximately 30 per cent of overweight individuals.

Readers of this Journal who have patients who might be candidates for the Obesity Research Clinic may write to Doctor Henn.

### Medical Missionary in Honduras—

Carl G. Amick, MD, a Loup City physician for over 32 years until his retirement, recently completed a nine-week tour-of-duty in Honduras, working in small rural villages. He went there at his own expense as part of a project sponsored by the River Oaks Baptist Church of Houston, Texas. Teams of six young people plus one American doctor and one adult advisor went from village to village giving immunizations, treating the sick, teaching English, and helping to improve living conditions.

### Skateboard Injuries—

Physicians throughout Nebraska are seeing more and more injuries due to skateboarding, a fad that has recently spread across most of this nation. An interesting observation is that in Los Angeles approximately one third of the injuries occurred in "children" over 30 years of age. Special problems are presented by those who skate on city streets, usually darting out from a sidewalk or private driveway into the street, giving a passing motorist little opportunity to avoid hitting them.

### Dosage

Anturane, brand of sulfipyrazone, is available as white, scored tablets of 100 mg. Initially, give half a tablet 4 times daily with meals or milk, increasing in one week to one tablet q.i.d. Increase to two tablets q.i.d. if necessary, and reduce if possible to as low as half a tablet q.i.d. after control. Continue through acute attacks, which can be concomitantly treated with phenylbutazone.

Patients on other uricosurics may be transferred to this drug at full dosage.

### Contraindications

Active peptic ulcer. Salicylates and citrates antagonize the drug's action and are contraindicated for concomitant use.

### Warning

Use with caution in pregnant women.

### Precautions

Keep patients under close supervision and make periodic blood counts. Use cautiously in patients sensitive to pyrazoles, in patients with histories of peptic ulcer, and in conjunction with sulfa drugs, the sulfonyleurea hypoglycemic agents, and insulin, the actions of which may be potentiated.

In mobilizing urate deposits, the drug may precipitate acute attacks of gout, urolithiasis, and renal colic, especially in the initial stages of therapy. Ensure adequate fluid intake and alkalinize the urine. With renal impairment, test renal function periodically.

### Adverse Reactions

The most frequent are upper gastrointestinal disturbances. The drug may activate peptic ulcer. Rash occurs infrequently. Although not reported to date, blood dyscrasias are a possibility.



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Geigy Chemical Corporation  
Ardsley, New York

# An antidepressant designed for the clinical realities of office practice

As many physicians have reported, the large majority of neurotic depressed patients suffer from both depression and anxiety. It may be difficult to decide whether these patients are primarily depressed or primarily anxious. And yet drug treatment of only the symptom which seems more prominent may exacerbate the untreated element of the depression complex.

Consequently, it would seem that therapy specifically aimed at both the depression and associated anxiety and tension should increase success in treatment.

This is one of the important reasons why 'Deprol' has proved particularly helpful. For 'Deprol' acts rapidly both to lift the mood and to relieve the associated anxiety, tension and insomnia.

And side effects, at recommended dosage, have been infrequent and generally readily controlled.

**Indications:** 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

**Contraindications:** Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

**Precautions:** *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may pos-

sibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side effects:** Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

**Benactyzine hydrochloride**—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

**Meprobamate**—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

**Dosage:** Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

**Supplied:** Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.

*Before prescribing, consult package circular.*

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The Worried Student

## Current Comment

### Wanted — New Campsite for Diabetic Children—

Initiated by the late Floyd Rogers, MD, sponsored by the Nebraska Diabetic Association, and "spark-plugged" by Anna Smrha of the Nebraska State Health Department, Camp Floyd Rogers has for fifteen years held forth during the first part of June at Nebraska City's Camp Catron. Camp Catron functions the remainder of the summer as a campsite for the Girl Scouts. However, in 1966 Camp Catron will not be available for the use of the diabetic children. Nebraska physicians who know of a suitable location for the 1966 encampment of Camp Floyd Rogers are invited to communicate with either Doctor Michael Crofoot, 542 Doctors' Building, Omaha, Nebraska, or with Miss Anna Smrha, State Health Department, State Capitol, Lincoln, Nebraska.

During the two weeks period during which this camp operates, more than 60 children between the ages of 5 and 16 learn the principles of diabetic diets, administer their own insulin injections, listen to daily lectures by visiting doctors, and enjoy the usual activities of a summer camp. Children from several states attend these camps. They are charged \$60 for the two week period. This covers about 50 per cent of the cost, the remainder of which is paid by the Nebraska Diabetic Association.

### Accidental Drowning — How to Prevent—

The mortality rate from drowning is still approximately 2.7 per 100,000 population. Deaths among males outnumber those among females by a ratio of 5 to 1. More than 50 per cent of all deaths occur before the age of 20. Two thirds of all deaths due to drowning occur in rivers, lakes, and similar bodies of water not designated for recreation and sports, where there is no supervision. In 1963 in California, more than 100 deaths occurred in home swimming pools.

These figures point up the need for intensifying water safety programs in our schools and communities. It has been estimated by the American Red Cross that only 50 per cent of the people in the United States swim

(Continued on page 24-A)



*when treatment  
might precipitate  
a problem  
with monilia*

*especially in  
elderly or  
debilitated  
patients*

and in diabetics — patients with a history of fungal overgrowth — patients on steroids who require antibiotics. The antimonial specificity of Nystatin plus the extra benefits of DECLOMYCIN Demethylchlortetracycline allow lower mg intake per dose per day, the option of b.i.d. dosage, higher activity levels, 1-2 days' "extra" activity.

*Side Effects* typical of tetracyclines include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms, tooth discoloration (if given during tooth formation) and increased intracranial pressure (in young infants). Also, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. Because of reactions to artificial or natural sunlight (even from short exposure and at low dosage), patient should be warned to avoid direct exposure. Stop drug immediately at the first sign of adverse reaction. It should not be taken with high calcium drugs or food; and should not be taken less than one hour before, or two hours after meals.

*Average Adult Daily Dosage:* four divided doses of 1 capsule each or two divided doses of 2 capsules.

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## Accidental Drowning — How to Prevent—

(Continued from page 22-A)

well enough to take care of themselves in the water should an emergency arise.

Many of our Nebraska schools have swimming pools that are not used as much as they should be. And many schools in smaller communities might be able to work out a program whereby students' swimming classes could be held at the local community pool. Those of our readers who serve on local school boards or as advisors to college administrators might do well to consider including swimming as a required part of the educational program.

## Drugs: New Peril in School Sports—

The September 10, 1965 issue of The Wall Street Journal directs its readers' attention to a recent report by the AMA's Committee on the Medical Aspects of Sports which states that some youngsters are taking drugs — tongue-twisters like dimethylsulfoxide, or potent sex hormones — either in hopes of boosting their athletic prowess or salving their aches and pains. And unauthorized use of these drugs carries serious health risks because of potential side effects.

The sex hormones involved are the androgenic or anabolic steroids which some young athletes have been trying in an effort to build weight. However, the use of these steroids in prepubertal boys may prematurely halt normal growth as well as induce precocious puberty. In boys who have reached puberty, use of these steroids may suppress the boy's natural production of testosterone. In adult males these hormones can cause a reversion of the size and function of the testes to the prepubertal stage. Such changes are insidious, and not immediately apparent.

In addition, the AMA group added, the hormones apparently do not help athletes anyway. A recent study by researchers at the University of California in Los Angeles showed no significant performance difference between athletes who had taken the hormones and those who had not.



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**Caution:** As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs.

**Contraindication:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Complete literature available on request from Professional Services Dept. PML.



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## Current Comment

### Migraine in Childhood—

During a six-year period (1950-1955) 92 children seen at the Mayo Clinic were diagnosed as having migraine. Among these patients gastrointestinal symptoms were more common than in adults. Also, boys outnumbered girls in a ratio of 2 to 1.

In January, 1964, follow-up questionnaires were sent to the parents of these 92 children, and the following facts were learned from the 58 questionnaires that were returned:

- 19 of these 58 children were completely well.
- 27 of these 58 were improved in that the headaches were less severe or occurred less frequently.

- 9 were unimproved, and of these, four found that sleep was the only way that they could get any relief.
- three patients were definitely worse.
- Treatment using salicylates or codeine or both was reported by the patients as the most satisfactory. Less satisfactory was a combination of ergotamine tartrate and caffeine. Many patients reported that they obtained relief by taking aspirin and going to sleep, or by resting and sleeping without taking any drug. (Mayo Clinic Proceedings, August, 1965).

~~~~~  
DOCTOR — Does your wife like to read the Auxiliary news? Then be sure and take your copy home.  
~~~~~

# THE NEBRASKA STATE MEDICAL JOURNAL

2430 Lake Street, Lincoln 2, Nebraska

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**Contraindications:** Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

**Precautions:** *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may pos-

sibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side effects:** Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

**Benactyzine hydrochloride**—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

**Meprobamate**—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

**Dosage:** Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

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## Current Comment

### American Medical Writers' Association—

In January, 1965 the Omaha - Lincoln Chapter of the AMWA was founded. Presently this chapter has 26 members. Dr. Keith Sehnert of Lincoln is the chapter president. Anyone interested in medical writing is invited to join this group. For more information and for application forms please write to Dr. Sehnert, Dorsey Laboratories, Lincoln, Nebraska. Membership is not limited to physicians, but is open to journalists and others who are active in the area of medical reporting and writing. At the recent annual meeting of the national association (Detroit—September, 1965) Dr. Morris Fishbein described the association as made up of "doctors who want to be writers and writers who want to be doctors."

### Athletic Trainers for High Schools?—

Bobby Gunn, Head Athletic Trainer at LaMar Tech in Beaumont, Texas, is conducting a crusade to have professional athletic trainers added to the staff of high school athletic departments. Mr. Gunn presented his views recently at the Third Annual Seminar on The Medical Aspects of Competitive Athletics, sponsored by the University of Nebraska, and held at the Cornhusker Hotel in Lincoln.

Mr. Gunn emphasized the following points:

- a. Professional athletic trainers are needed more at the high school level than on the college level. These trainers should replace the so-called "student trainer" who lacks the professional "know-how" and the experience necessary to carry out the coach's directions — and the doctor's orders.
- b. Professional athletic trainers can help the coach in pre-season conditioning and can help the doctor in the rehabilitation of athletes who are injured.
- c. In 1951 there were but two qualified trainers working in high schools in the state of Texas. In 1965 there are 30 high schools with professional athletic trainers.

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**Contraindications:** Hypersensitivity and most cases of severe renal or hepatic disease.

**Warning:** With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind.

**Precautions:** Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

**Side Effects:** Agranulocytosis, constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, impotence, leukopenia, muscle cramps, nausea, postural hypotension, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.

**Average Dosage:** One tablet (100 mg.) daily with breakfast.

**Availability:** Tablets of 100 mg. in bottles of 100 and 1000.

For full details, see the complete prescribing information.

\*Dorhout Mees, E.J., and Geyskes, G.G.: Acta med.scandinav. 175:703, 1964.

Photos: A 59-year-old woman with hypertensive cardiovascular disease and edema resistant to low-salt diet and bed rest. The patient lost 8½ lbs. in one week with a single tablet daily of Hygroton, brand of chlorthalidone.



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## Current Comment

### Tranquilizers—

Dr. J. Kinross-Wright and colleagues of the Houston State Psychiatric Institute, Houston, Texas report that rehospitalization of psychiatric patients can be appreciably reduced if phenothiazine drugs are prescribed under the care of the family physician. In a series of 441 patients the rehospitalization rate was less than 12%. The Houston investigators suggested that the family physician be the mainstay in assuring supervised medical maintenance therapy and in coordinating the use of community resources in helping to restore the patient to active participation in community life.

However, in using the phenothiazine drugs one should keep in mind possible complications. Drs. C. Sheppard and Merlis Sidney of the Central Islip State Hospital, Central Islip, New York reported that 341 of 6640 patients receiving psychotropic drugs required antiparkinson medication, indicating extrapyramidal side effects of approximately 5%.

Drs. S. McClanahan and colleagues of the University of Minnesota Medical School described ocular complications in 16 patients who had received chlorpromazine over long periods of time. Irreversible lens pigmentation was seen in 13 patients, corneal pigmentation in 9, conjunctival pigmentation in 3, and skin pigmentation in 8. (Medical Science, August, 1965)

### Nebraska Doctor Makes Important Discovery—

Robert Coatney, MD, a son of Mrs. Ed Coatney of Falls City, Nebraska, working with a team of U.S. Public Health Service scientists, has helped prove that malaria in monkeys can be transmitted by the anopheles mosquito to man. This is the first time that natural transmission by this method has been conclusively demonstrated.

The events leading up to this finding began when a 37-year-old American man became ill in Bangkok, Thailand, after spending four weeks in Malaya. He returned to the United States where, upon arrival in

(Continued on page 30-A)

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### Dosage

Anturane, brand of sulfipyrazone, is available as white, scored tablets of 100 mg. Initially, give half a tablet 4 times daily with meals or milk, increasing in one week to one tablet q.i.d. Increase to two tablets q.i.d. if necessary, and reduce if possible to as low as half a tablet q.i.d. after control. Continue through acute attacks, which can be concomitantly treated with phenylbutazone.

Patients on other uricosurics may be transferred to this drug at full dosage.

### Contraindications

Active peptic ulcer. Salicylates and citrates antagonize the drug's action and are contraindicated for concomitant use.

### Warning

Use with caution in pregnant women.

### Precautions

Keep patients under close supervision and make periodic blood counts. Use cautiously in patients sensitive to pyrazoles, in patients with histories of peptic ulcer, and in conjunction with sulfa drugs, the sulfonyleurea hypoglycemic agents, and insulin, the actions of which may be potentiated.

In mobilizing urate deposits, the drug may precipitate acute attacks of gout, urolithiasis, and renal colic, especially in the initial stages of therapy. Ensure adequate fluid intake and alkalinize the urine. With renal impairment, test renal function periodically.

### Adverse Reactions

The most frequent are upper gastrointestinal disturbances. The drug may activate peptic ulcer. Rash occurs infrequently. Although not reported to date, blood dyscrasias are a possibility.



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*Indications:* 'Soma' is useful for management of muscle spasm, pain, and stiffness in a variety of inflammatory, traumatic, and degenerative musculoskeletal conditions. It also may act to normalize motor activity in certain neurologic disturbances.

*Contraindications:* Allergic or idiosyncratic reactions to carisoprodol.

*Precautions:* 'Soma', like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate.

*Side Effects:* The only side effect reported with any frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms.

One instance each of pancytopenia and leukopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reactions, carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression.

*Dosage:* Usual adult dose is one 350 mg. tablet three times daily and at bedtime.

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## Nebraska Doctor Makes Important Discovery— (Continued from page 24-A)

California, he experienced shaking chills and a high fever. He was referred to the National Institute of Health Clinical Center in Bethesda, Maryland. He was found to have malaria and was treated successfully. Samples of his blood were sent to the U.S. Penitentiary at Atlanta, Georgia, where the blood was inoculated into healthy prisoners who volunteered to take part in the experiment. Samples were also inoculated into several rhesus monkeys, all of whom died with overwhelming malarial infections. The prisoner volunteers were treated and survived. Other species of monkeys were inoculated, and all but one species, the gibbon, became ill.

The parasite was identified as the Plasmodium knowlesi, previously thought to be specific for monkeys.

Dr. Coatney is Chief of the Parasite Chemotherapy Section of the National Institute of Health Laboratory. (Science, August, 1965)



"Let's put it this way . . . if you were a building you'd be condemned!"



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2430 Lake Street, Lincoln 2, Nebraska

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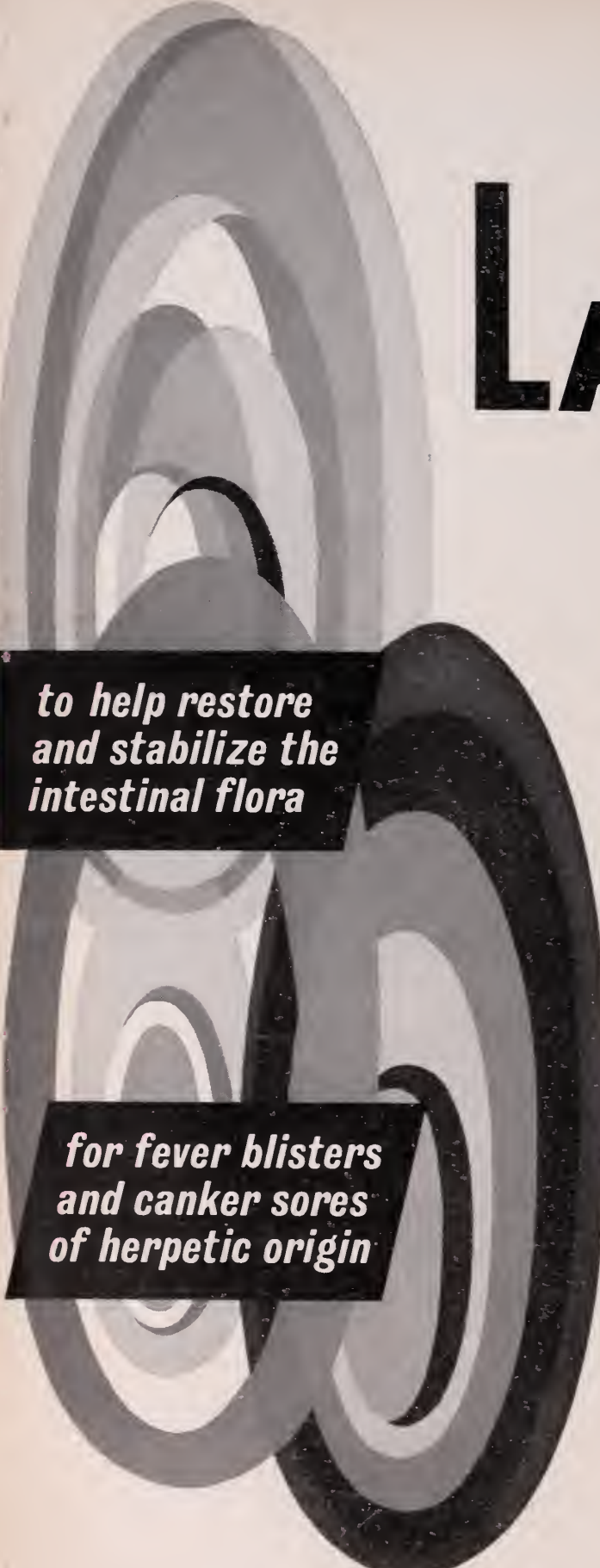
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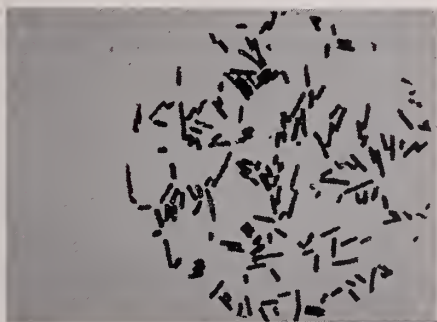
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## **NegGram®** Brand of **nalidixic acid**

**Think of NegGram, the specific anti-gram-negative.**

In adults two 500 mg. NegGram Caplets® orally four times a day for one or two weeks will control most gram-negative urinary infections...including many that have proved resistant to other anti-infective agents. NegGram works without causing crystalluria, fungal overgrowth, nephrotoxic or ototoxic effects. Quickly...effectively...with low risk of side effects.

**Gram-negative urinary infection**  
—cystitis, pyelitis, pyelonephritis, prostatitis, urethritis?  
**Start first with NegGram.**

**Indications:** Urinary tract infections caused by gram-negative and some gram-positive organisms.

**Side effects:** Mainly mild, transient gastrointestinal disturbances; in occasional instances, drowsiness, fatigue, pruritus, rash, urticaria, mild eosinophilia, reversible subjective visual disturbances (overbrightness of lights, change in visual color perception, difficulty in focusing, decrease in visual acuity and double vision), and reversible photosensitivity reactions. Marked overdosage, coupled with certain predisposing factors, has produced brief convulsions in a few patients.

**Precautions:** As with all new drugs, blood and liver function tests are advisable during prolonged treatment. Pending further experience, like most chemotherapeutic agents, this drug should not be given in the first trimester of pregnancy. It must be used cautiously in patients with liver disease or severe impairment of kidney function. Because photosensitivity reactions have occurred in a small number of cases, patients should be cautioned to avoid unnecessary exposure to direct sunlight while receiving NegGram, and if a reaction occurs, therapy should be discontinued. The dosage recommended for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Bacterial resistance may develop.

When testing the urine for glucose in patients receiving NegGram, Clinistix® Reagent Strips or Tes-Tape® should be used since other reagents give a false-positive reaction.

**Dosage:** Adults: Four Gm. daily by mouth (2 Caplets® of 500 mg. four times daily) for one to two weeks. Thereafter, if prolonged treatment is indicated, the dosage may be reduced to two Gm. daily. Children may be given approximately 25 mg. per pound of body weight per day, administered in divided doses. The dosage recommended above for adults and children should not arbitrarily be doubled unless under the careful supervision of a physician. Until further experience is gained, infants under 1 month should not be treated with the drug.

**How supplied:** Buff-colored, scored Caplets® of 500 mg. for adults, conveniently available in bottles of 56 (sufficient for one full week of therapy) and in bottles of 1,000.

250 mg. for children, available in bottles of 56 and 1,000.

**Winthrop**

Winthrop Laboratories, New York, N.Y. 10016



## Current Comment

### Heart Failure Simulating an Acute Surgical Abdomen—

Doctor T. G. Hostetler and colleagues of Kansas City, Kansas reported two cases of nonocclusive ischemia or infarction of the bowel. They concluded as follows:

"Congestive heart failure may cause findings simulating an acute surgical abdomen due to acute mesenteric vascular insufficiency. There is evidence to suggest that reduced cardiac output with mesenteric angiospasm and intestinal ischemia is the primary cause of the abdominal findings in some cases. The patient in congestive heart failure with this clinical picture is unlikely to have a surgically treatable lesion and is a poor operative risk. Proper management would seem to be vigorous therapy of the cardiac failure." (The American Journal of Cardiology, October, 1965.)

### Medical Careers Day—

Members of the Adams County Medical Society Auxiliary plan to have representatives from 14 different, medically related, professions represented at their Medical Careers Day Teaching Clinic which will be held in Hastings on November 20, 1965. Invitations have been sent out to high school students throughout central Nebraska.

A similar program was held in October in Beatrice, Nebraska. This one was sponsored by the Women's Auxiliary to the Gage County Medical Society. Over 60 students from the high schools in Beatrice and surrounding towns attended.

### Nebraska Doctor Re-creates Masters' Violins—

Doctor Lloyd N. Kunkel of Weeping Water, Nebraska has recently been featured in an article in the Omaha World-Herald which told of his unusual hobby of creating authentic replicas of the violins and violas of the old masters.

After nearly 50 years of work in his hobby field, Dr. Kunkel is beginning his 109th reproduction — a copy of a 16th century kit. A kit is a slim violin used by dancing masters from the 16th to the 18th centuries.

# DEPROL®

meprobamate 400 mg. +  
benactyzine hydrochloride 1 mg.

**Indications:** 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

**Contraindications:** Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

**Precautions:** *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side effects:** Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

*Benactyzine hydrochloride*—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

*Meprobamate*—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

**Dosage:** Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

**Supplied:** Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.

*Before prescribing, consult package circular.*

 WALLACE LABORATORIES / Cranbury, N. J.



## following infection

STRESSCAPS B and C vitamins in therapeutic amounts...help the body mobilize defenses during convalescence...aid response to primary therapy. The patient with a severe infection, and many others undergoing physiologic stress, may benefit from STRESSCAPS.

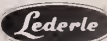
# STRESSCAPS<sup>®</sup>

Stress Formula Vitamins Lederle



**Each capsule contains:**  
 Vitamin B<sub>1</sub> (as Thiamine Mononitrate) 10 mg.  
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 Calcium Pantothenate 20 mg.  
 Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 (one month's supply) and 100 (three months' supply).

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## Current Comment

### Clinical Application of Mammography—

Charles C. Whitsett, M.D., a radiologist in Ravenna, Ohio, after studying a series of 597 breast examinations, reported the following conclusions:

"Small nonpalpable cancers of the breast can be found by X-ray examination. This technique offers the best hope of improving the mortality rate in the treatment of this disease. Mammography has made its place in this locality. It offers definite and valuable information to supplement that obtained by history and physical examination. The major source of error in our series was in the small, dense, glandular or fibrocystic breast. In this type of breast it was difficult to obtain adequate contrast on the films. Two other sources of error were fingermarks on the film giving the appearance of cancer calcifications, and film artifacts giving the appearance of a cluster of small densities with an overall diameter of about 2 mm. This appearance also resembled cancer cal-

cifications except for the extremely small size. Intraductal papillomatosis and periductal fibrosis accounted for the majority of the 17 false-positive cancer diagnoses made in this series." (Geriatrics, November, 1965).

### Glomectomy — Its Present Status—

Doctor Richard H. Overholt of Boston is still advocating the removal of the carotid body as treatment for the asthmatic patients who are so-called "medical failures."

However, Doctor M. A. Green, Past President of the American College of Allergists says that in his patients who have had a glomectomy procedure performed, the patients' need for medication has continued virtually unchanged and there has been a lack of objective improvement in these patients. He thinks that there has been inadequate assessment of the placebo effect of this operation. He concludes, "Glomectomy is definitely not the answer to intractable asthma." (Issues in Current Medical Practice, September, 1965).



your Rx for  
**Cremomycin**  
can provide relief



min K. Neomycin: Patient should be observed for new infections due to bacteria or fungi. *Side Effects:* Sulfonamide: Sensitivity reactions may occur (e.g., skin rashes, anemia, polyneuritis, fever; agranulocytosis with a fatal outcome has been reported). Reduction of thiamine output in the feces and of vitamin K synthesis has been observed. Neomycin: Nausea, loose stools possible.

*Before prescribing or administering, read product circular with package or available on request.*

promptly relieves diarrheal distress

# Cremomycin<sup>®</sup>

**ANTIDIARRHEAL**

*Composition:* Each 30 cc. contains neomycin sulfate 300 mg. (equivalent to 210 mg. of neomycin base), succinylsulfathiazole 3.0 Gm., colloidal kaolin 3.0 Gm., pectin 0.27 Gm.

**MBD MERCK SHARP & DOHME** Division of Merck & Co., Inc., West Point, Pa.

**where today's theory is tomorrow's therapy**

## Current Comment

### Forced Retirement?—

Doctor Cecil Wittson, Dean of the University of Nebraska College of Medicine, in a lecture delivered at the recent regional Conference on Aging and Long-term Care held in Denver, Colorado, focused attention upon the problems of forced retirement. He said, "The decision as to whether an older individual should continue to work beyond 60, 65, or 70, or any arbitrary age, should be made on an individual basis, taking into account both the desire and the job performance of the person involved. To arbitrarily put a person out of work at a given age not only can be a cruel blow to the worker but can deprive our nation of a valuable resource. Some small colleges, a few private employers, and certain government agencies, such as the Peace Corps and domestic anti-poverty programs, are realizing this and are making a place for men and women who have been forced to retire from their life's employment. Maybe this is the best that can be expected for these persons, but I think that a re-examination of the retirement policy is in order."



"When he comes to, tell him I was just holding up my hands to dry my nail polish."

**Description:** Hygroton, brand of chlorthalidone, is an oral diuretic agent of value in the treatment of edema and hypertension. The drug is notable for its prolonged action (48-72 hours) and low toxicity. It is not a thiazide and may often be employed successfully in patients who are intolerant of other agents or become refractory to them.

**Indications:** Hypertension and many types of edema involving retention of salt and water.

**Contraindications:** Hypersensitivity and most cases of severe renal or hepatic disease.

**Warning:** With administration of enteric-coated potassium supplements, the possibility of small bowel lesions should be kept in mind.

**Precautions:** Reduce dosage of concomitant antihypertensive agents by at least one-half. Discontinue if the BUN rises or liver dysfunction is aggravated. Electrolyte imbalance and potassium depletion may occur; take special care in cirrhosis or severe ischemic heart disease, and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

**Side Effects:** Agranulocytosis, constipation, dizziness, dysuria, headache, hyperglycemia, hyperuricemia, impotence, leukopenia, muscle cramps, nausea, postural hypotension, purpura, thrombocytopenia, transient myopia, urticaria, vomiting and weakness.

**Average Dosage:** One tablet (100 mg.) daily with breakfast.

**Availability:** Tablets of 100 mg. in bottles of 100 and 1000. For full details, see the complete prescribing information.

**Hygroton®**  
brand of  
chlorthalidone

**The long-acting  
diuretic**



## On Stelazine<sup>®</sup> brand of trifluoperazine she's calm and alert

When a tranquilizer is needed, 'Stelazine' can regulate the level of anxiety so that the patient is unlikely to overreact to stress but is not tranquilized into psychic inertia. Patients on 'Stelazine' often experience a sense of mental alertness and, because they feel so much better, are more interested in their normal activities.

*Contraindicated* in comatose or greatly depressed states due to CNS depressants and in cases of existing blood dyscrasias, bone marrow depression and pre-existing liver damage. *Principal side effects*, usually dose-related, may include

mild skin reaction, dry mouth, insomnia, fatigue, drowsiness, dizziness and neuromuscular (extrapyramidal) reactions. Muscular weakness, anorexia, rash, lactation and blurred vision may also be observed. Blood dyscrasias and jaundice have been extremely rare. Use with caution in patients with impaired cardiovascular systems.

Before prescribing, see SK&F product Prescribing Information.

Photograph professionally posed.



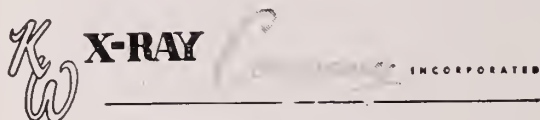
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Whether it is X-Ray Equipment or X-Ray Supplies, or accessories such as, cassettes and intensifying screens, developing tanks, illuminators, hangers, loading bins, dark room lamps, interval timers, x-ray film and processing chemicals, The K & W X-Ray Company can promptly supply, and at sensible prices.

We are also franchised dealers for the H. G. Fischer Electro Medical and X-Ray apparatus in Nebraska.

Our "Johnny on the spot" availability for service and co-operation is always available for those who need it.



Medical Arts Building  
111 So. 17th Street  
Omaha, Nebraska



"I'm getting off to a good start as a doctor, dear! I had my first case today . . . MEASLES!"

## Current Comment

### Chemotherapy of Hyperlipidemia—

Doctor William B. Parsons, Jr. at a recent Mayo Clinic Symposium on Peripheral Vascular Disease made the following observations:

- "a) Many patients will not accept for home use the degree of dietary alteration that for them will lower elevated levels of serum cholesterol and maintain them in the 'normal' or 'desirable' range of 150 to 250 mg/100 ml.
- "b) Even the most strictly dietary programs fail to produce 'desirable' cholesterol levels as consistently as the most successful cholesterol-reducing drugs can do while the patient eats as he pleases.
- "c) Of the more than 60 drugs which have been advocated since 1950 for the reduction of hypercholesterolemia, the following appear to be the most promising:

- 1) Estrogens. These drugs do reduce cholesterol levels in the blood, and long-term use can result in the disappearance of visible cholesterol deposits in the skin and tendons. Their drawbacks are mainly those of feminization in males, withdrawal bleeding in females, and retention of salt and water, which can be hazardous in congestive heart failure or coronary insufficiency.
- 2) Nicotinic Acid. This drug has been studied since 1955 and has a demonstrated ability to decrease serum cholesterol and triglycerides without dietary alteration. A total daily dose of 1.5 to 3 grams of the intermediate-release aluminum nicotinate is usually enough to do the job. Cutaneous vasodilatation and flushing usually sub-

(Continued on page 26-A)



## An eminent role in medical practice

- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

**Indications:** 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

**Contraindications:** Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

**Precautions:** Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may

# Miltown® (meprobamate)

possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

**Side effects:** Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very

rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

**Usual adult dosage:** One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

**Supplied:** In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

*Before prescribing, consult package circular.*

**WALLACE LABORATORIES**  
Cranbury, N.J.



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AUTHORIZED CONTRACT AGENT



"It helps pay my hospital bill and keeps visitors from staying too long."

## Chemotherapy of Hyperlipidemia—

(Continued from page 24-A)

sides after the first week of therapy.

- 3) D-Thyroxine. Of the many thyroid analogs this preparation is the most successful. In doses of 4 to 8 mg a day it reduces cholesterol values in most patients. However, increased angina, myocardial infarction, aggravation of congestive heart failure and 'escape' represent side-effects serious enough to prevent recommendation of this agent. Bleeding in patients receiving coumarin derivatives is another drawback that has been observed during D-Thyroxine therapy.
- 4) Heparin. This drug, when used by injection into the subcutaneous tissues, can lower cholesterol and triglyceride levels in the blood. However, oral and sub-lingual heparin preparations have not been effective, and the use of heparin by injection is expensive.
- 5) Ethyl Chlorophenoxyisobutyrate (CPIB). This is a new product whose clinical usefulness is presently under study.

In summary, I believe that from the available drugs, the clinician would be wise to learn to use nicotinic acid preparations."

It is noted that Dr. Nelson W. Barker, in commenting on Dr. Parson's paper, stated that he disagreed with the view that the dietary approach is almost always ineffective. He stated that for some patients a long-term dietary approach was the best treatment. (Mayo Clinic Proceedings, November, 1965.)



DOCTOR — Please take each copy of your Journal home. The wives complain that they never get to read the Auxiliary column.





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## Current Comment

### Homecoming for a Nebraska Doctor—

Dr. Oliver William Hasselblad, a 1936 graduate of the University of Nebraska College of Medicine, who presently lives in New York City where he is President of the American Leprosy Missions, returned to Omaha on October 31 for a series of meetings, during which he will explain the work of his organization. Dr. Hasselblad spent nearly 20 years in India as a physician-surgeon under the auspices of the American Baptist Foreign Mission Society. He was Medical Director of the Christian Hospital in Jorhat, Assam, India. He has made extensive surveys of leprosaria in Africa, and South America.

### NOTICE TO ALL CONTRIBUTORS

The deadline for items to appear in the following issue of the JOURNAL is the 10th of the month. The JOURNAL goes to press on the 12th.





## PHYSICIANS' EXCHANGE

Advertisements in this column are at a rate of ten cents per word with a minimum of \$2.00 per insertion. Copy must be received by the fifth of the month preceding date of publication and should not exceed 40 words. Advertisements from members of the Nebraska State Medical Association will be accepted without charge for two issues. Each advertisement will be taken out following its second appearance unless otherwise instructed. Where numbers follow advertisements, replies should be addressed in care of The Nebraska State Medical Journal, 1315 Sharp Build-

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**USED MEDICAL AND SURGICAL EQUIPMENT** — For sale including X-ray and Ritter Table. Many smaller items. R. T. Satterfield, MD, 724 East Jefferson Street, Millard, Nebraska. Phone 308-334-2563.

**AK-SAR-BEN AREA OFFICE FOR RENT** — 861 sq. ft., air conditioned, large parking area, near-new building, designed for two G.P.'s. Contact: William H. Ashley, 1512 South 60th Street, Omaha Nebraska 68106. Phone 553-7500.

**GENERAL PRACTICE OPPORTUNITY** — Office equipment and building of the late H. B. Rae, M.D., for sale or lease. A general practice of 35 years leaves a good opening in a community of 15,000, in which a new doctor would be readily accepted. Call or write Mrs. H. B. Rae, Torrington, Wyoming. Phone 532-3156.

**GENERAL PRACTITIONER** — Locum tenens in a thriving suburban in Omaha, Nebraska, March, April and May 1966. Financial arrangements, negotiated, could lead to permanent association. Send full particulars in first letter. An excellent opportunity for the right man. Write Box 63.

**INTERNIST** — For 5-man department in busy and steadily growing north central Kansas 13-member multispecialty group. Partnership after salary for two years. Board eligible or certified. Write Gelvin-Haughey Clinic, Concordia, Kansas.

Excellent Opportunity for GENERAL PRACTITIONER in community of 15,000; central Florida; 76-bed JCAH Hospital. Write or call collect: R. C. Thompson, Bartow Memorial Hospital, Bartow, Florida.

**Control of Hospital Staphylococci** — E. J. Stokes et al (University College Hosp, Gower St, London). *Lancet* 2:197-201 (July 31) 1965.

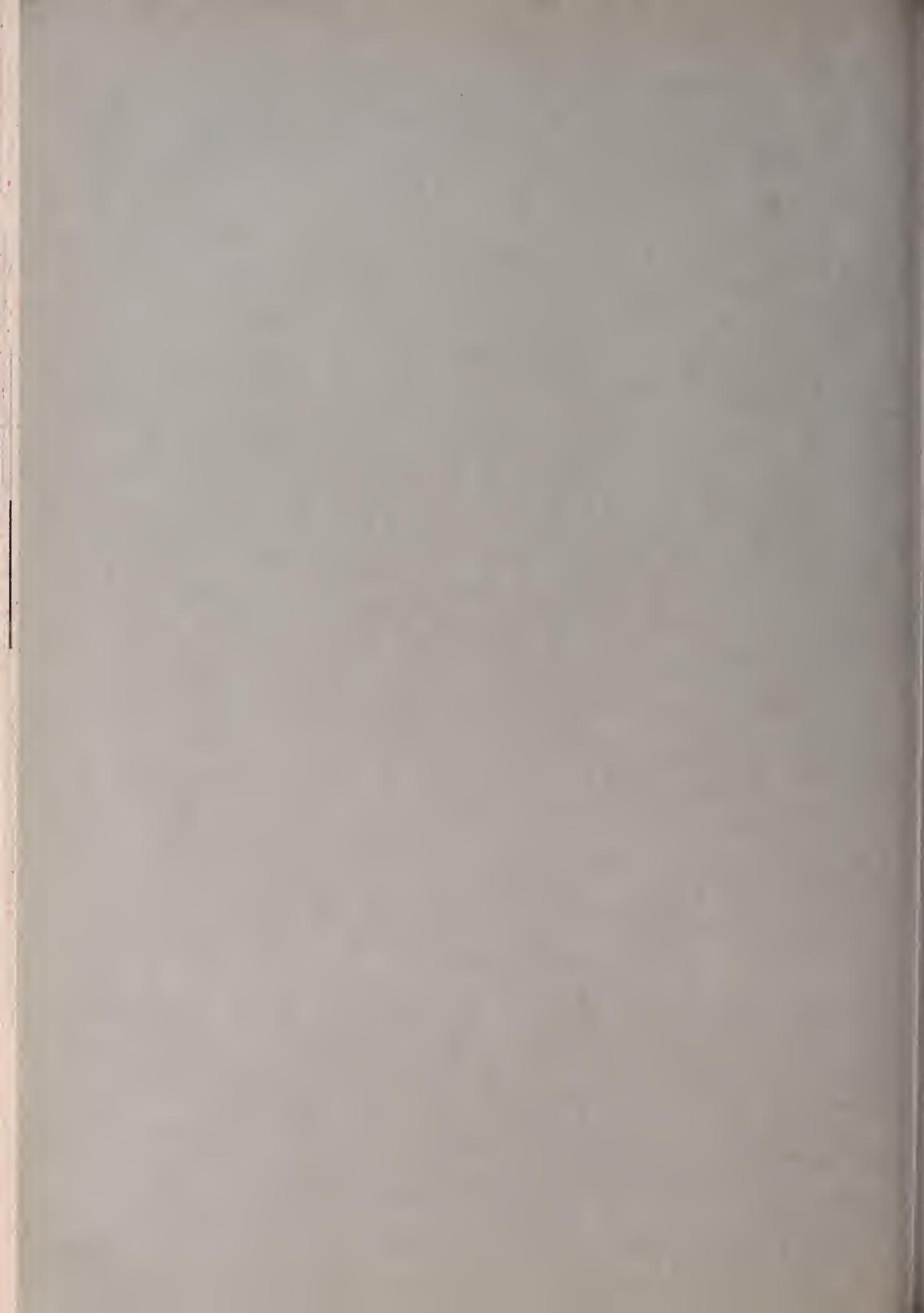
A study of staphylococcal infection and carrier-rates in a large general hospital during four years showed that infection-rates caused by antibiotic-resistant strains were related to the number of nasal carriers of tetracycline-resistant strains admitted to the wards. Recognition and treatment of nasal carriers of resistant strains in patients and staff on entering the hospital community was followed by reduced infection-rates arising from resistant strains with no corresponding increase of infection by sensitive strains. The number of carriers of resistant strains admitted to the wards was related to the frequency of previous hospital admission and average duration of stay, and varied greatly in different categories of patients. The results of this investigation in no way diminish the importance of good aseptic technique. Wounds can be kept free of infection, even when the load of cocci is high, if aseptic technique is rigidly observed, but minor lapses are more likely to result in infection when there are many resistant cocci in the ward.

**Routine Vaginal Smears on Hospital Admission** — W. Liu (Youngstown Hosp. Association, Youngstown, Ohio). *Obstet Gynec* 26:518 (Oct.) 1965.

A three-year experience of a hospital-wide program of routine cytological screening of women patients for uterine cancer is described. The incidence of positive smears among hospitalized women was 4 per 1,000 as compared to approximately 2 per 1,000 in the screening of nonhospitalized or office patients. More than half of the cancer patients diagnosed in the screening program were asymptomatic. In eight of the 27 patients with carcinoma of the cervix, the lesion was in the preinvasive stage.







## THE NEBRASKA STATE MEDICAL JOURNAL

### IMPORTANT QUESTIONNAIRE

As you know, advertising income is of the utmost importance to the life of our *Journal* and it is down from former years. The reason it is down is that the pharmaceutical companies have adopted other methods of doing the major part of their advertising.

The State Medical Journal Advertising Bureau through which most of this advertising comes to us, believes the answers to a questionnaire from each doctor may be very helpful to them in obtaining more contracts from pharmaceutical companies thus increasing our income from that important source. They have devised this questionnaire making it easy to complete. We are reproducing their copy on page 33. Please help us by completing this form and mailing it at once as directed.

### SOME OF OUR ADVERTISERS

In the November issue of our *Journal* we carried advertisements for the following pharmaceutical companies:

Park, Davis and Company; Wallace Laboratories; Winthrop Laboratories; Bayer Glenbrook Laboratories Company; Smith Kline & French Laboratories; Lederle Laboratories; A. H. Robins Co., Inc.; Pfizer Laboratories; Eli Lilly and Company; G. D. Searle; Geigy Pharmaceuticals; Ames Company; Roche Laboratories; and Burroughs Wellcome. In addition, two local companies, Donley Medical Supply and Gilmore-Danielson, have space in this issue.

These companies offer practically anything in the way of medication the doctor needs, and always keep in mind the sentence we have always carried at the bottom of each page, as follows: "You can enhance the value of your own *Journal* by patronizing its advertisers."

### WHAT OF THE GENERAL PRACTITIONER?

Many, probably most classes in medicine contain fewer new MD's at the time of graduation who are pointing toward general practice than when this was the freshman class. Why? Could it be because the information they have received has been channeled to them through other specialists? Obviously, the surgeon, the ophthalmologist, the orthopedist and other specialists subconsciously paint a rosier picture of their work than the student has of that of the general practitioner. Of course, the drama and recompense of the surgical procedure still take a toll from all other specialties.

No matter what name is given them — generalist, general practitioner, family physician — the total number in relation to population is steadily declining, and the total in relation to the number of physicians is falling. In other words, there are fewer and fewer doctors who do and will respond to the call to visit and care for the sick people in their homes; yet, as far as we can see, we must have this kind of physician. He is one of the most important cogs in the machine.

General practitioners are specialists. There is no other group of physicians who can do what they do and do it so well. Their "Academy" has made excellent provision to keep them up to date and furnishes them an excellent journal. At a meeting of medical education and hospitals sponsored by the council of the AMA devoted to these facets, it was suggested that internists and pediatricians be urged to enter this field under the euphony of "Family Physicians," but freely admitted that these groups were not prepared to wear this hat without going back to get more schooling. This writer does not see, as he looks down the line of specialties, any other group that could come as near being prepared for general practice as are the internists and pediatricians.

A goodly segment of our medical education is given by specialists whose specialty does not include general practice. It is only

human for such teachers to present medicine to the student in the light of his own specialty. Unless he consciously keeps himself within certain guide lines, he will not present his subject in the manner that it should be used by the general practitioner. The generalist must be taught to do everything he safely can do for his patient, to recognize promptly those conditions that lie beyond his skill, and to refer his patient, when necessary, to a competent specialist in the proper category. He is not going to be an EENT specialist, an orthopedic surgeon, a general surgeon, an obstetrician or gynecologist, or what have you; of necessity, he is going to dabble in all these fields. But, when the chips are down and the water too deep, he is going to call for competent help.

Since one of our prime needs is more good general practitioners, why shouldn't the entire four years in medical school plus the year of internship be beamed at turning out 100 per cent good general practitioners? Specialism will take care of itself during the residency.

With the above in mind, it should be mandatory that every teacher be or become thoroughly familiar with the life and work of the good generalist. He should do this even if it involves a period or periods of tutelage somewhat like that of the preceptorship for undergraduates. If the internist or pediatrician has to go back to school to become a good family physician, perhaps the major part of this postgraduate study should be under a good preceptor. He would need some additional scientific training beyond that of the internist or pediatrician, but equally badly he needs the *art* of general practice. Where is there a better place to get this than from a good general practitioner?

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## News and Views

### Transmigration of the Old Family "Doctor Book"—

The American Medical Association is preparing for publication "Today's Health Guide," a manual of health information and guidance for the American family.

The manual will be an inclusive compendium of information about health which will be most helpful to the family in making the best and most economical use of the sources of health information, preventive medical services, treatment of illness and adequate meeting of emergencies, an AMA spokesman said.

The 640-page book, in two colors throughout, will include 70 chapters, each dealing with an important aspect of health in the family. It will be illustrated by hundreds of easy-to-understand drawings, including "trans-vision," or full-color "see through" drawings, of the organs and systems of the human body.

More than 200 practicing physicians and specialists, dentists, veterinarians, clergymen, chemists, physicists, nurses, educators, engineers, safety experts, writers and reviewers have a part in assembling the book. There also is wide participation by many members of the full-time staff of the AMA, both as contributors and consultants.

The AMA does not expect to make a profit on the book, and will distribute it in the interest of better health, the spokesman said. None of those participating in the writing and preparation of the book will be compensated in any way. Regular price will be \$5.95, with an introductory offer of \$4.95. The manual will be distributed from the AMA headquarters, 535 N. Dearborn St., Chicago, by mail order.

### Foreword on Clinical Session AMA at Miami Beach, Nov. 29 - Dec. 2—

Health care for the aging, a new teletype communications system for the medical profession, a statement on human reproduction and recommendations from the Commission on the Cost of Medical Care were among the major subjects acted upon the House of Delegates at the American Medical Association's 19th Clinical Convention held November 29-December 2 in Miami Beach, Florida.

Tribute was paid to the late Dr. Norman A. Welch, AMA President who died on September 3, in a memorial statement from



the Massachusetts Medical Society and in a resolution adopted by the House.

Dr. James Z. Appel of Lancaster, Pa., vice chairman of the AMA Board of Trustees and a member of the Board since 1957, was named President-Elect of the Association. He will become President in June, 1965, succeeding Dr. Donovan F. Ward of Dubuque, Iowa, who took office after the death of Dr. Welch.

Your upcoming "Delegates' Report" will bring you the details.

#### Growth of the "Blues"—

Health insurance protects 48 million more Americans today than it did 10 years ago, the Health Insurance Institute reported December 11.

Ten years ago, over 97 million Americans were covered by hospital expense insurance. Since then there has been a coverage increase of nearly one-and-one-half times, and a total of over 145 million persons were protected against the cost of hospital care at year-end 1963, declared the Institute.

In 1953, 61 per cent of the U.S. civilian population was protected by some form of health insurance, while at the beginning of this year 77 per cent was so insured.

The same type of growth has been shown, said the Institute, by other forms of health insurance.

In 1953, nearly 81 million Americans had surgical expense insurance, but in the following 10 years there was a 67 per cent increase in this coverage and at the end of 1963 nearly 135 million persons had protection against the cost of surgical bills.

Regular medical expense insurance covered nearly 43 million Americans in 1953. However, there was a coverage increase of more than two times in ten years so that more than 102 million persons were insured last year.

#### New District Manager of the Blues at Grand Island—

Tom McAloon became the new District Manager for Blue Cross - Blue Shield at Grand Island, on November 9th.

#### New Group Added to the Blues—

On December 1, the Tote System of Beatrix, a division of Hoover Ball and Bearing of Detroit, became a member of Nebraska Blue Cross-Blue Shield.

#### Doctors' Assistants' Turned Out Well—

At 14 Doctors' Assistants' meetings there was an attendance of 663.

#### Blue Cross - Blue Shield Payments

As of November 27, 1964, Blue Cross-Blue Shield of Nebraska had paid \$105,668,151.20 on members' claims.

#### A Successful Antivirus Agent—

Stoxil, Smith Kline & French's brand name for idoxuridine, is offered as an ophthalmic ointment. It is said to be effective against herpetic keratitis, an infection of the cornea that often leads to blindness.

#### Wyeth's 1965 Film Catalogue Available—

Thirty-eight medical films, including a new one on surgery for varicose veins, are listed in Wyeth Laboratories' latest motion picture catalogue, which was released November 19th.

These films are available free from Wyeth and many include booklets for discussions to accompany the showings. Prepared under the supervision of qualified physicians, these films are directed to medical audiences. Some films, however, may be used with paramedical groups.

The new film on "Surgery of Varicose Veins and Ulceration" was prepared in Melbourne, Australia, under the direction of Dr. John Mullany of Bethlehem Hospital. It was shown for the first time at the recent meeting of the American College of Surgeons, whose committee on motion pictures has given this film its approval. It is a 22-minute, 16-mm, color-sound film.

For a copy of the new Wyeth film catalogue, ask any Wyeth representative or write to Wyeth Film Library, Box 8299, Philadelphia, Pa. 19101. For borrowing any film at least three weeks' notice is needed to make the film available.

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## Comments From Your President

There were several actions taken by the the House of Delegates of the AMA at the Clinical Session at Miami that are worthy of comment. Probably the most important of these was the reaffirmation of the previous stand of the AMA in favor of free enterprise and against all types of socialization of medicine. While there were a few resolutions suggesting some form of compromise, these were turned down in favor of the traditional stand of organized medicine. Certainly, it is my opinion that this is the only honorable stand that the AMA could take after the many years of heroic effort by the stalwarts of medicine. While there is full comprehension of the seriousness of the situation concerning the consideration of King-Anderson type legislation by the new session of Congress, the situation is not completely hopeless. There are many members of both parties in the House and the Senate who are traditionally against socialism. These form a hard core and together with a good many who cannot help reacting against the administration's "Great Society," could well vote down adverse legislation. However, we must double our efforts to make known at all times and to all people the evils of socialized medicine. I am certain that you will be intimately involved in a markedly accelerated program by all organized medicine. We must also recognize the shortcomings of Kerr-Mills and urge our present State Legislature to correct these. We have lost a battle, but we can still win the war.

The House of Delegates also passed the recommendation of the Trustees of the AMA concerning a rapid type of communication system between the AMA headquarters in Chicago and state association headquarters. Also some of the larger county societies will be included and there will be available communication between state associations. It is also worthy to note that



the cost of the original installation of \$1500 and the annual cost of \$20,000 will be borne by the AMA and this without increase in dues, either AMA or state. As a matter of fact, this system will, in all probability, result in a savings for our state association in our monthly toll telephone charges.

Finally, the House of Delegates elected Dr. James Appel of Lancaster, Pennsylvania as president-elect to take office at the Annual Convention in June. Dr. Appel is very well qualified, having worked for many years in various AMA capacities, including his present position as Vice Chairman of the Board of Trustees. Your Nebraska Delegates enthusiastically supported Dr. Appel. In fact, one of Dr. McCarthy's last official acts after 19 years representing Nebraska, was to second Dr. Appel's nomination. The AMA will be in capable hands for the next year and a half. We wish Dr. Appel good health and a successful term of office, and personally pledge him full support.

—RICHARD GARLINGHOUSE,  
President.

EXPERIENCE WITH

# Operative Cholangiography

In 103 Patients\*

G. D. ADAMS, MD  
Norfolk, Nebraska  
and

W. W. GLAS, MD  
Eloise, Michigan

## INTRODUCTION

**S**INCE the introduction of operative cholangiography by Mirizzi in 1932,<sup>1</sup> the value of this diagnostic technique has been assessed by many authors, most of them finding it a useful procedure. Mixer and his co-workers, in 1951,<sup>2</sup> stated that, following the conventional criteria for choledochostomy, approximately 50 per cent of explorations of the bile duct are negative. With operative cholangiography, on the other hand, the proportion of negative explorations was reduced to 30.9 per cent. The investigators further state the number of negative explorations could have been reduced still further had the surgeon accepted the evidence provided by a negative operative cholangiogram.<sup>2</sup>

In 1959, Hight and his collaborators<sup>3</sup> pointed out the importance of avoiding unnecessary explorations of the bile duct. In a review of 800 cholecystectomies, these authors found a mortality rate of 0.5 per cent for cholecystectomy alone. When choledochostomy was added to the procedure, however, the mortality rate rose to 2.0 per cent.<sup>3</sup>

Also noteworthy is the experience of Isaacs and his co-workers, who found that, in a series of 87 cholecystectomies for gallstones, stones were found in the common bile ducts of seven patients in whom there were no clinical indications for choledochostomy, the presence of stones being unsuspected until manifested by a positive operative cholangiogram.<sup>4</sup> Other authors have reported comparable findings.<sup>5</sup>

A study of 102 cases in which operative cholangiography was attempted is presented. It was found that, in 62 successful pri-

mary cholangiograms, six patients probably had been spared choledochostomy by the evidence of a negative cholangiogram. No patients were found in whom unsuspected stones in the common bile duct were revealed by operative cholangiography, and in two other cases, negative operative cholangiograms were obtained despite the fact that ensuing exploration of the common bile duct revealed the presence of stones.

The value and limitations of operative cholangiography are discussed, and the opinion is expressed that, while this method is of ancillary value to the surgeon, it must not be used as a substitute for sound surgical judgment.

The use of operative cholangiography was initiated in this institution in 1957. Originally, it was used only in selected cases but, before long, all patients undergoing surgery of the biliary tract were studied by means of operative cholangiograms unless a contraindication, usually the precarious condition of the patient, existed. The present report concerns experience with operative cholangiography in this institution from 1957 through 1960.

## Materials and Methods

### *Patients*

During the period from 1957 through 1960, operative cholangiography was attempted in 102 cases. Of this number, 89 had primary cholangiography performed before or without exploration of the common bile duct. The usual clinical indications for exploration of the common bile duct were eight in number: (1) obstructive jaundice or history of jaundice; (2) thickening of the wall of the common bile duct; (3) dilatation of the com-

\*Presented at the Frederick A. Collier Meeting, American College of Surgeons, Committee on Trauma and Nutrition, Ann Arbor, Michigan, May 23, 1963. From the Wayne County General Hospital, Eloise, Michigan.



mon bile duct; (4) the presence of many small (that is, smaller in diameter than the cystic duct) stones in the gallbladder; (5) palpable stone in the common bile duct; (6) the presence of muddy bile or gravel in the common bile duct; (7) chronic pancreatitis or thickening of the head of the pancreas; (8) biliary cirrhosis. The presence of jaundice or of palpable stones in the common bile duct was considered as absolute evidence for choledochostomy; operative cholangiograms were used only as confirmatory evidence in these cases. Otherwise, negative primary cholangiograms were considered as strong evidence that the patient might be spared choledochostomy.

### Procedures

Originally, in primary operative cholangiography, the contrast agent was injected into the cystic duct by means of a small caliber needle. A high percentage of failure attended this method, however, and the present technique of inserting a small caliber polyethylene catheter into the cystic duct was developed.<sup>4</sup> This modification of the original technique has proved to be very satisfactory. The present procedure is as follows: When the junction of the cystic and common hepatic ducts has been identified, the cystic duct is isolated and ligated to prevent the milking of stones into the common bile duct. An 18-gauge polyethylene catheter is then inserted into the cystic duct and secured in place. After air bubbles have been removed from the catheter by the gentle aspiration of bile, about 20 cc of 30 per cent sodium acetate<sup>6,7</sup> (Urokon) is injected into

it. Apnea is then induced by the anesthetist, and one or more X-ray exposures are made. Ordinarily, the surgeon proceeds with the cholecystectomy while the films are being developed. In secondary operative cholangiography, the radiopaque medium is administered through the drainage T tube inserted in the common bile duct.<sup>5</sup>

### Results

Of the 102 patients in the present series, 89 were examined by primary cholangiography either before or without choledochostomy. In 21 of these 89 patients, or 23 per cent, visualization of the biliary ducts was unsatisfactory. Most of these unsatisfactory studies were performed, however, before the surgical and X-ray staffs were completely familiar with the procedure. In the remaining 13 patients, cholangiography was performed by means of the drainage T tube following choledochostomy, as discussed below.

Table 1 compares the clinical and primary cholangiographic indications for choledochostomy together with the surgical findings in the first group of 89 patients. It can be seen that among the 68 patients of this group for whom satisfactory cholangiograms were obtained, 21 presented one or more of the eight usual clinical indications for choledochostomy, but that 19 of these 21 patients had films that were negative for stone. Common duct explorations were performed in 15 of these 21 patients with clinical symptoms. The remaining six patients were spared further surgery because of the evidence of a normal biliary tree in their

Table 1  
CLINICAL AND PRIMARY CHOLANGIOGRAPHIC  
FINDINGS IN 89 PATIENTS

| No. of Cases | Indications for Choledochostomy* | Primary Cholangiogram** | Choledochostomy | Retained Stones |
|--------------|----------------------------------|-------------------------|-----------------|-----------------|
| 2            | Present                          | Positive                | Positive        | No              |
| 11           | Present                          | Negative                | Negative        | No              |
| 0            | --                               | Positive                | Negative        | No              |
| 2            | Present                          | Negative                | Positive        | No              |
| 53           | Present in six                   | Negative                | Not done†       | No              |
| 21           | --                               | Unsatisfactory          | ----            | --              |

\*—See text, under Materials and Methods, for eight indications for choledochostomy.

\*\*—"Positive" indicates presence of stones; "negative" indicates absence of stones.

†—Operative cholangiograms revealed normal biliary tree.

primary operative cholangiograms. Of the 15 patients in whom explorations of the common bile duct were performed, stones were found in eight, including the two whose films had been positive for stone. There were thus seven cases in which, had the evidence of the primary operative cholangiogram been followed, the patient would have been spared choledochostomy. On the other hand, there were two cases in which the films had been negative for stone, but stones were found upon surgical exploration of the common bile duct. Also, operation proved the presence of stones in the two patients cited above whose films had been positive for stone. Altogether then, in the 15 cases examined by choledochostomy, primary cholangiographic findings were accurate in 13 cases and inaccurate in two cases. It again should be pointed out, however, that these inaccurate studies were performed before the staffs were completely familiar with the technique.

Table 2 shows that the X-ray findings were in accord with the subsequent clinical course in 12 of the 13 patients in whom secondary (T tube) cholangiograms were taken. The single failure was one case in which the T tube cholangiogram was negative although there was a retained stone. A subsequent T tube cholangiogram did, however, reveal its presence.

### Discussion

The data presented in Table 1 and Table 2 indicate that primary (catheter) and secondary (T tube) operative cholangiography, at least with present methods, are useful but not infallible diagnostic techniques. It is felt that primary operative cholangiography can be of great assistance to the sur-

geon in deciding whether or not to proceed with exploration of the common bile duct. This decision may be of particular importance when clinical indications for this surgical procedure are questionable or marginal or when the condition of the patient is such that a minimum of operative manipulation is desirable. The secondary (T tube) cholangiogram, done after choledochostomy, is also of confirmatory value in the detection of stones that may have been retained. It is of interest, however, that, in the present series, there was no detection of unsuspected common bile duct stones as has been reported elsewhere.<sup>4,5</sup> The present limitations of operative cholangiography should be kept in mind by the surgeon at all times. Particularly, a negative operative cholangiogram should not be considered as absolute evidence that there is no pathologic condition of the common bile duct when there are strong clinical evidences that obstruction is present. It is the responsibility of the surgeon to view the films himself, with or without consultation with the radiologist, making his own evaluation of them.

When the surgeon and the radiologist are familiar with the techniques, little operating time is lost by the addition of operative cholangiography. This is especially true when the cholangiograms are obtained routinely rather than on a selective basis.

### Summary

A study of 102 cases in which operative cholangiography was attempted is presented. Included are 89 in which primary (catheter) cholangiography was attempted before or without exploration of the common bile duct and 13 in which secondary (T tube) cholan-

Table 2  
RESULTS OF OPERATIVE T-TUBE CHOLANGIOGRAPHY  
IN 13 PATIENTS

| No. of Cases | Choledochostomy | T-Tube Operative Cholangiogram | No. of Cases Showing Retained Stones |
|--------------|-----------------|--------------------------------|--------------------------------------|
| 0            | Positive        | Positive                       | 0                                    |
| 3            | Positive        | Negative                       | 1*                                   |
| 0            | Negative        | Positive                       | 0                                    |
| 10           | Negative        | Negative                       | 0                                    |

\*—Stones revealed by second T-tube cholangiogram.

giograms were taken during the course of surgery of the biliary tract. It was found that, in 62 successful primary cholangiograms, six patients had probably been spared choledochostomy by the evidence of a negative cholangiogram. No patients were found in whom unsuspected stones in the common bile duct were revealed by operative cholangiography, and in two other cases, negative operative cholangiograms were obtained despite the fact that ensuing exploration of the common bile duct revealed the presence of stones.

The value and limitations of operative cholangiography are discussed, and the opinion is expressed that, while this method is of ancillary value to the surgeon, it must not be used as a substitute for sound surgical judgment.

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"... the major focus of attention has been on ways of paying for the treatment of elderly patients in hospitals or other institutions. The potentialities of organized home health services for providing care in the homes of older citizens have not been fully and imaginatively explored.

"Visiting nurse services, homemaker services, organized home care programs, and a variety of services can augment physician's care in the home. However . . . homecare programs have been slow to develop, and the use of visiting nurse services has not been proportional to the growth in the number of chronically-ill aged in our communities." (From Phillips, Harry T., et al: *Public Health Reports* 79:571, July, 1964).



# Infections in Infants\*

THE gamma globulins of plasma contain all or almost all the specific humoral factors responsible for normal resistance — the antibodies. There are three main families of gamma globulins thus far recognized: (a) the 7S  $\gamma$  2 globulins, which have a molecular weight of about 170,000, constitute approximately 90 per cent of the total gamma globulins in human plasma and contain most of the antitoxins, antibacterial, and antiviral antibodies; (b) the 19S  $\gamma$  globulins, called B<sub>2</sub>M by some, have a molecular weight of 1,000,000, and represent approximately 10 per cent of the total gamma globulins and contain such reactants as the "natural" isohemmagglutinins, the heterophile antibodies, rheumatoid factors and some vital antibacterial and antiviral substances; (c) the 7S  $\gamma$  1 globulins sometimes termed B<sub>2</sub>A globulins, apparently contain some antibodies but the function of this fraction thus far is not clear.<sup>1</sup>

The two types of gamma globulin in the newborn infant are broken down into the 7S  $\gamma$  2 and 19S  $\gamma$  1. The 7S  $\gamma$  2 crosses the placenta very readily. It is to be remembered that very little albumin is able to cross the placenta. The placenta serves as an extremely selective organ. The 7S  $\gamma$  2 group of gamma globulins cross and give the same blood level in the infant as in the mother.

The 19S  $\gamma$  1 group do not cross the placenta and it is this group with a molecular weight of around 1,000,000 that provides antibodies against enteric organisms as *E. Coli* and the salmonella group. It is because of this that an *E. coli* diarrhea in the newborn may prove to be a most serious illness. The fetus does not have the ability to form antibodies.

The infant begins to synthesize 7S  $\gamma$  2 globulin at about eight weeks of age and reaches an adult level of gamma globulin when he is two years of age.

B<sub>2</sub>M globulin or 19S  $\gamma$ , is formed by the infant somewhat earlier than are the 7S

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group but in the immediate newborn period these are lacking for they do not cross the placenta as mentioned above.

One must remember that the fetus in utero is not immunologically responsive. Infection in the first trimester may produce an abortion or a malformation. Rubella is a good example with deformities of the eye, ear, and at times brain changes.

In a ten year period of study by Morris Siegel and Morris Greenberg (New York),<sup>3</sup> rubella occurred in 392 pregnant women. The outcome of the pregnancy was unknown in 20 of the patients and a therapeutic abortion was done in 78, leaving 294 in whom the outcome of pregnancy could be observed. In 180 cases the rubella occurred in epidemic years, and in 114 cases in nonepidemic years. There were 42 fetal deaths and 252 live births. Fetal death occurred in one-half of the pregnancies affected in the first eight weeks of gestation and in 20 per cent of those affected in the third month.

The study indicated that the most critical period for rubella infection is the first seven weeks of gestation during epidemic periods. Of 19 pregnancies observed at this time, 53 per cent terminated in spontaneous fetal deaths, 26 per cent in live births with major defects, and 21 per cent in live births without demonstrable deformities. One-half of the live infants without deformity were prematures, weighing 2500 grams or less.<sup>3</sup>

Later in pregnancy one must also consider infections due to syphilis, toxoplasmosis, and cytomegalic inclusion body disease.

\*Presented before Omaha Mid-West Clinical Society, 31st Annual Session, October 30, 1963.

The neonatal period may be complicated by infections as a result of: (1) ascending infection, (2) contact with the birth canal, or (3) contact with the infant's new environment. One must keep in mind that the newborn infant only cries, suckles, sleeps, voids, and defecates. His signs of infection may remain very minimal. Dr. Janeway, in a lecture on this subject in August of this year, pointed out his inadequate immunological response, having to rely on the mother's antibodies of the 7S series and a marked absence in the macroglobulins which impart protection for the enteric organisms.<sup>1</sup>

At three months of age he now has a minimum of passive immunity remaining and also a very poor immunologic system of his own. It is felt that this is one of the possible causes for the high incidence of crib deaths between two and six months of age.

The infant who is jaundiced in the newborn period may well have erythroblastosis; however, many of these infants have a septic process and not an hemolytic one. A not uncommon infection in the neonate is meningitis. Meningitis in the premature and newborn differs as to etiology, in that the mother gives immunity against *Hemophilus influenzae*, and *Diplococcus pneumoniae*. The infant, however, has been exposed to *Escherichia coli* and other gram-negative bacilli. It is these latter organisms that cause sepsis and meningitis in the newborn.

Kagan<sup>4</sup> in a study of meningitis in pre-matures found that of 22 patients, 14 were due to *Escherichia coli* or *Klebsiella*.<sup>4</sup> One must keep in mind that the clinical picture of meningitis in the small infant is much different, the reason being the expansible skull at this age. The infant may show cyanosis, fever, or a subnormal temperature, emesis, or a refusal to eat, possibly jaundice, irregular respirations, and he may be jittery or show marked drowsiness. One must have a high index of suspicion, particularly in small infants and immediately do a diagnostic lumbar puncture. A lumbar puncture should be carried out at the slightest suspicion of meningitis. A common feature in these infants is a difficult labor and a

careful study may reveal an infection in the mother such as an infected urine.

One should also keep in mind the marked difference in an infant's response to viral infections as compared to the response in the mother to the same viral agent. The newborn infant does not defend himself at all well against the viruses of variola, herpes simplex, cytomegalic inclusion body and particularly coxsackie viruses. The coxsackie B virus may only produce a mild grippe in the mother, while in the infant it may very well give a fatal myocarditis. One series of 45 infants with a coxsackie myocarditis had only 12 survivals.<sup>5</sup>

Gold, Carver, Heinberg, Adelson, and Robbins<sup>6</sup> attempted to isolate viral agents from tissues obtained at autopsy from 48 infants whose deaths were sudden and unexpected and from two who met traumatic deaths. More than half the infants were aged three months or less at death and 75 per cent were under age seven months. The oldest was aged 19 months. In none of the infants were autopsy findings considered adequate explanations for the death. Material from the 50 children was examined for the presence of virus by tissue culture and inoculation of suckling mice. Viral agents were detected in specimens from 12 infants. In five it was obtained from the stool or pharynx and in seven others from the brain or spinal cord. All the agents were enteroviruses.

Coxsackie virus, group A, type 4 was isolated from eight infants and was present in the central nervous system of six of them. One patient grew out a type 3 poliovirus and a coxsackie from the stool. Group A coxsackie virus was recovered from ten of the patients studied. The methods used were particularly suited for isolation of enteroviruses. The myxoviruses and other more fastidious agents might well not have been demonstrated. An association of enteroviruses and sudden death was suggested by the high infection rate of 25 per cent of the cases in this study. A reasonable hypothesis concerning the etiology of sudden, unexpected death seems to be that among possible causes, virus infection is important and that



the specific agent may be any one of the large number that infect almost every child sometime during early life. The fatal outcome may result from the specific localization of the infection, as in the central nervous system, or from a host of factors, not thus far defined.

One period during the life span in which an individual differs most obviously from his adult counterpart occurs in early infancy. Unfortunately, this fact is not often considered in the selection of antimicrobial agents, except when some unfortunate incident proves that a drug relatively innocuous to an older age group may have high toxicity in the infant. Furthermore, a drug which proves reasonably effective in treating adults may fail to be equally successful in infants and perhaps vice versa.

We shall consider several antibiotics in relation to their dosage and indications for the newborn period.

In small infants *Penicillin* is particularly useful because of its high potency and low toxicity. Penicillin G is well absorbed after intramuscular injection and because of diminished renal function in the newborn, high blood levels persist with the Crystallin Penicillin G and so Procaine Penicillin is not necessary. Give 15,000 units per Kg every 12 hours, intramuscular. Phenoxymethyl (Penicillin V) giving 30,000 units per kilogram orally, every eight hours is also very effective in prematures and newborns. Dimethoxyphenyl Penicillin (Staphicillin) is very valuable in the management of staphylococcal infections.

*Streptomycin* is quite effective in treating gram negative organisms, particularly *E. coli* and some strains of pseudomonas and proteus. Streptomycin's greatest disadvantage lies in the fact that resistance to it develops rapidly; as a result many strains of common entero bacteria are not affected by its action. Dr. Eichenwald<sup>7</sup> advises 40 mg per kg per day, half of the amount being administered every 12 hours. Some authors advise only 10 to 15 mg per kg per day. The drug should be given for only seven to ten days to avoid vestibular or auditory damage.

*Sulfonamides*: Silverman<sup>8</sup> demonstrated that sulfisoxazole (Gantrisin) given to prematures results in an increased incidence of kernicterus and because of this sulfonamides have generally been abandoned in the treatment of infections in the newborn period. Long acting sulfonamides should not be administered to mothers prior to delivery for the same reason.

*Tetracyclines* is a family of many related drugs: chlortetracycline (Aureomycin), oxytetracycline (Terramycin), demethyl chlortetracycline (Declomycin), and tetracycline itself. These show much the same antibacterial action. They are effective against both gram-positive and gram-negative organisms. They are rapidly absorbed from the stomach and small intestine; however, absorption of tetracycline by prematures and newborns is poor. One needs a large dose of the drug in the newborn to get an adequate blood level and the dose is 25 mg per kg every six hours (approximately four times the regular dose). They give no toxic effects excepting an increase in the number of stools in some infants. The intramuscular tetracyclines are somewhat irritating and it is not unusual for an infant to develop a sterile abscess at the point of administration. I prefer the intramuscular oxytetracycline if one selects a preparation of this group; give 6 mg per kg every eight hours.

*Erythromycin* (Erythrocin, Ilosone): This has an antibiotic spectrum of action very similar to penicillin. The fact that this agent's spectrum closely resembles that of penicillin, means that the use of erythromycin is more or less limited to the treatment of staphylococcal disease caused by penicillin-resistant bacteria and to those few instances in which the use of penicillin might be undesirable for other reasons. It is well absorbed by the gastrointestinal tract. Give it in a dose from 25 to 40 mg per kg per day.

*Neomycin*: This drug is closely related to kanamycin and has a similar antibacterial spectrum. It is not used parentally because of its toxicity. It is poorly absorbed from the gastrointestinal tract and for this reason is used in pediatrics for the treatment of epidemic diarrhea of the newborn due to



enteropathogenic strains of *E. coli*. One gives 50 to 100 mg per kg per day, by mouth.

*Chloramphenicol* (Chloromycetin): Most gram positive and gram negative organisms are sensitive to its action; the common exceptions however, are pseudomonas and proteus groups. Chloramphenicol is readily absorbed from the upper gastrointestinal tract. It enters the spinal fluid with ease, which makes it a very valuable drug. Recently, however, much concern has come about, because of hematologic disturbances due to chloramphenicol.

In 1959 reports began to come forth that indicated that the administration of large doses of chloramphenicol in young infants was often associated with a type of cardiovascular collapse and it was termed the "gray syndrome." Because of this, at the New York Hospital this antibiotic is not given to an infant under two months of age. The toxicity of chloramphenicol in infants is apparently related to a deficiency in the hosts glucuronic acid conjugating capacity and the reduced rate of renal clearance. If one does use this drug in infants under one month of age then give only 25 mg per kg per day in prematures and infants less than one week old.

Dr. Eichenwald, at the time of the writing of this article<sup>7</sup> preferred bacitracin for the treatment of staphylococcal disease. He feels that in infants it is quite safe. He would give 1000 units per kg per day in a full term infant, given at 8 or 12 hour intervals by deep intramuscular injection; in infants weighing less than 2500 gm he would give 900 units per kg per day. He would not

use it more than 10 to 12 days. He feels that the only indication for the use of systemically administered bacitracin was staphylococcal disease caused by organisms resistant to penicillin.

Dr. Horace Hodes<sup>5</sup> reviewed the penicillins in an Infectious Disease Seminar in October, 1963, at the Academy of Pediatrics meeting and pointed out that thus far, both *methicillin* (Staphcillin), which is an intramuscular medication, and the oral *oxacillin* (Prostaphlin) give great promise in the management of staphylococcal infections. It would seem that these two penicillins should be tried in the infant with a staphylococcal pneumonia rather than chloramphenicol or bacitracin as a first choice.

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No man is so empty as he who thinks he is full. No man is so ill as he who has a fatal disease and yet thinks he is in perfect health. No man is so poor as he who thinks he is rich and is actually bankrupt." (Graham: The Secret of Happiness, p. 47).

# Atypical Tuberculosis

CAUSED BY

# Unclassified *Mycobacteria*\*

Report of Three Cases

## Introduction

**D**URING the past decade mycobacteria other than *Mycobacterium tuberculosis*, *M. bovis* or *M. avium*, have been increasingly reported as the etiologic agents of a disease resembling pulmonary tuberculosis. These mycobacteria have been referred to in the past as "atypical," "anonymous," or "unclassified" acid-fast bacilli, and the disease produced by them is known as atypical tuberculosis or mycobacteriosis. Reports in the literature indicate that the unclassified acid-fast organisms are the causative agents in two per cent of all cases diagnosed as pulmonary tuberculosis in the United States and that the incidence of the disease may be as high as 10 per cent in some parts of the country.<sup>1-6</sup> Unclassified mycobacteria have been the etiologic agent in about four per cent of the patients admitted to the tuberculosis service of this hospital from January 1959 to January 1964.

## Review of the Literature

For many years there have been sporadic reports of acid-fast bacilli other than *M. tuberculosis* capable of producing pulmonary disease in humans. These organisms differed from mammalian tubercle bacilli in bacteriologic cultural characteristics and in failure to produce progressive disease in guinea pigs.<sup>4, 7-17</sup> In recent years there has been an increasing number of reports of disease due to these unclassified mycobacteria. This is attributed to improved bacteriologic

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methods, more general use of culture-techniques and an evaluation of drug resistance in the bacteriologic diagnosis of pulmonary disease. Many of the cases of pulmonary disease caused by the unclassified mycobacteria have been reported in patients who have had no known contact with the human tubercle bacillus. Only a few have had a previous diagnosis of tuberculosis confirmed by the isolation of *M. tuberculosis*.<sup>1, 3-5, 15-17</sup>

It has been suggested that the unclassified mycobacteria may be mutant forms of *M. tuberculosis* resulting from chemotherapy.<sup>18-19</sup> However, these organisms existed before the advent of antituberculosis drugs and have been isolated from patients prior to chemotherapy. *Mycobacterium tuberculosis*, moreover, has been exposed to these antimicrobial agents many times in the laboratory without the development of mutants simulating the unclassified organisms. The origin of these mycobacteria is not clear.

In the past, microbiologists have classified acid-fast bacilli isolated from clinical material as either pathogens or saprophytes. Today the increased isolation of mycobacteria that falls into neither of these categories has led to an intensified study of these organisms. This group has been classified by Runyon<sup>5, 6</sup> as follows:

Group I — Photochromogens or  
*M. kansasii*

Group II — Scotochromogens

Group III — Nonphotochromogens  
(Battey bacillus)

Group IV — Rapid growers

The major bacteriologic characteristics of the organisms as compared with *M. tubercu-*

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losis are listed in table 1. Group I, photochromogens, are the most homogeneous group antigenically and for this reason have been named *M. kansasii*.<sup>6, 20</sup> The four groups vary in their pathogenicity for man. Group I organisms are more frequently encountered in disease than the others and are common in the Midwest.<sup>5, 21</sup> Group II organisms rarely produce diseases but are often encountered as laboratory contaminants, while Group III organisms are commonly associated with disease in the Southeastern States.<sup>22, 23</sup> Disease caused by Group IV organisms is limited to only a few reported cases, and *M. fortuitum* is the most common member to be pathogenic.<sup>24, 25</sup>

It is generally agreed that the symptoms, physical signs, and roentgenographic appearance provide no reliable differentiating features between atypical and classical tuberculosis with the exception of person-to-person infectivity.<sup>1-17</sup> Cross-reactivity in skin tests has been observed between the antigens of the unclassified organisms and the antigen of *M. tuberculosis*; however, the reaction is usually sufficiently greater with the homologous antigen to be suggestive.<sup>26-28</sup> Many investigators have shown the close antigenic relationship of the mycobacteria. Antigen-antibody studies by the agar-gel double diffusion technique have demonstrated that all mycobacteria have one or more antigens in common.<sup>29</sup> Absorption and inhibition tests by Beck<sup>30</sup> indicate the presence of a specific antigen in *M. kansasii*. Antigenic differences between the unclassified mycobacteria and saprophytic strains have also been demonstrated.

The mammalian strains of tubercle bacilli are usually susceptible to antituberculosis drugs while the unclassified mycobacteria show general resistance to these drugs as well as to most antimicrobial agents. It must be emphasized that generalization can be misleading; therefore, the regimen of each patient should be based on the results of sensitivity studies of his organism.<sup>1, 16, 17</sup>

Although the unclassified mycobacteria have been primarily isolated from sputum, extrapulmonary disease has included the skin, lymph nodes, spleen, liver, pancreas,

Table 1  
MAJOR CHARACTERISTICS OF SOME MYCOBACTERIA CAUSING PULMONARY DISEASE IN MAN

| Type of Mycobacteria                        | Colony                              | Pigmentation When Grown |                   | Niacin Test | Catalase Activity            | Growth at 25° | Growth at 37° | Growth at 45° C | Pretherapy Drug Resistance        | Guinea Pig Virulence |
|---------------------------------------------|-------------------------------------|-------------------------|-------------------|-------------|------------------------------|---------------|---------------|-----------------|-----------------------------------|----------------------|
|                                             |                                     | in dark                 | in light          |             |                              |               |               |                 |                                   |                      |
| <i>M. tuberculosis</i>                      | dry, rough                          | off-white or buff       | off-white or buff | +           | moderate*<br>2+              | —             | +             | —               | susceptible                       | +                    |
| Gr. I. <i>M. kansasii</i> (Photochromogens) | moist, smooth or rough              | off-white or buff       | yellow to orange  | —           | vigorous<br>4+               | +             | +             | —               | partially or completely resistant | — mice usually +     |
| Gr. II Scotochromogens                      | moist, smooth rarely rough          | yellow to orange        | yellow to orange  | —           | vigorous<br>4+               | +             | +             | —               | partially or completely resistant | —                    |
| Gr. III Nonphotochromogens (Battey type)    | small, smooth rarely rough          | off-white or buff       | off-white or buff | —           | moderate to weak<br>2+ to 1+ | +             | +             | —               | partially or completely resistant | ±                    |
| Gr. IV Rapid growers                        | smooth or rough, growth in 2-4 days | off-white or buff       | off-white or buff | —           | vigorous<br>4+               | +             | +             | ±               | partially or completely resistant | —                    |

\*Certain isoniazid resistant strains are catalase deficient (0 to 2+)



gastrointestinal tract, pleura, meninges, adrenals, and joints.<sup>10, 11, 16, 17, 31-33</sup> With the exception of the Group II Scotochromogens, these bacilli are seldom found in healthy persons.<sup>19, 34</sup> The incidence of the disease is greater among Caucasians than Negroes and the distribution is world-wide.<sup>3-5, 17</sup>

### Case Reports

*Case 1:* A 44-year-old white man was admitted to this hospital on Jan. 8, 1963, because of the findings on a routine chest roentgenogram. He was

asymptomatic and his past medical and family history were negative for tuberculosis. Physical examination was non-contributory. The chest roentgenogram showed infiltration in the apex of the left upper lobe and planigrams revealed a one cm cavity. Sputum specimens were positive for acid-fast bacilli on microscopy and cultures were identified as unclassified photochromogenic mycobacteria (Group I, *M. kansasii*).

Skin tests with five tuberculin units



Figure 1. Case 1. Smears of large acid-fast bacilli in a caseous lesion. These organisms show palisade formation and beading. Ziehl-Neelsen stain. X1400.



Figure 2. Case 2. Chest roentgenogram on admission shows a cavitary lesion with surrounding infiltration in the left upper lobe.

(TU) of PPD produced eight mm of induration, PPD-Y (*M. kansasii*) 15 mm, PPD-B (Battey antigen) 7 mm, histoplasmin 5 mm, and coccidioidin was negative. Treatment consisted of streptomycin (SM) one gm, isonicotinic acid hydrazid (INH) 600 mg and para-aminosalicylic acid (PAS) 12 gm, daily for two months with no essential roentgenographic change. He underwent a left thoracotomy on March 6 and subsegments of the apical and posterior segments of the left upper lobe were excised. Gross and microscopic examination of the resected tissue disclosed disease indistinguishable from untreated tuberculosis. Acid-fast stained smears showed large, palisade and beaded organisms (figure 1), while

cultures grew out the same unclassified photochromogenic mycobacteria as were originally isolated from the sputum. The patient's postoperative course was uneventful and he was discharged on April 10.

**Present Status:** The patient is being seen periodically in the chest clinic. Postoperative roentgenograms of the chest have remained negative. Streptomycin was discontinued on July 9, because of vestibular disturbances and thiomide was added, but the patient could not tolerate this drug and it was dropped from the regimen. He continued taking INH and PAS for one year. He is well and back at work at the present time — June, 1964.

*Case 2:* This 64-year-old white man was transferred to this hospital on Jan. 31, 1963 with a diagnosis of pulmonary tuberculosis. He had had a productive cough for about 10 years which had increased in severity in the past six months. He complained of progressive dyspnea for the past year. There was no family history of tuberculosis.

Physical examination of the chest revealed a bilateral lag on inspiration, diminished breath sounds in both lungs and coarse rales in the left upper chest. The chest roentgenograms showed moderate emphysema and a large cavity with surrounding infiltration in the left upper lung field (figure 2); planigrams revealed multiple cav-

ities. Smears of the sputum were repeatedly positive for acid-fast bacteria and cultures yielded many colonies of unclassified photochromogenic mycobacteria (Group I, *M. kansasii*).

The skin test with five TU of PPD showed no induration on three occasions and a test with 250 TU of PPD was also negative. Skin tests with PPD-Y and PPD-B both produced 10 mm of induration. Histoplasmin and coccidioidin skin tests were negative. His initial antituberculosis chemotherapy consisted of streptomycin one gm, INH 600 mg, and PAS 12 gm, daily. The patient was hypersensitive to streptomycin and it was discontinued. Thiomide (250 mg t.i.d.) was added to his treatment when



Figure 3. Case 2. Chest roentgenogram made 11 months after admission showing complete clearing except for a small fibrotic lesion in the left apex.



results of *in vitro* sensitivity studies became known. There was gradual clearing of the pulmonary infiltrate and closure of the cavity and he was discharged April 29 subject to follow-up studies.

**Present Status:** The patient has been examined periodically in the chest clinic. His last chest film (Feb. 25, 1964) was essentially normal except for a small fibrotic lesion in the left apex (figure 3). Four sputum cultures taken since his release from the hospital have been negative. He was continued on antimicrobial therapy for six months. The patient is now asymptomatic and working full time — June, 1964.

**Case 3:** A 52-year-old white man was admitted to the hospital on April 12, 1963 with complaints of staggering toward the right, headaches, and episodes of vomiting. He had a mild nonproductive cough. His past medical history revealed no previous respiratory disease and the family history was negative for tuberculosis.

Physical examination discovered neurological findings suggestive of chronic meningitis or cerebellar tumor. Examination of the chest was within normal limits. A roentgenogram of the chest showed a bilateral pulmonary infiltration. His sputum was positive on microscopy for acid-fast bacilli and unclassified photochromogenic mycobacterium (Group I, *M. kansasii*) was isolated in cultures. Several gastric cultures produced the same mycobacterium.

The PPD, histoplasmin and coccidioidin skin tests were negative, while PPD-Y produced 22 mm of induration and PPD-B, 8 mm. Streptomycin, INH and PAS were given initially and thioimide added when sensitivity studies indicated susceptibility to the latter drug.

Examination of the cerebrospinal fluid on three occasions disclosed leukocyte counts of 12, 5 and 25 per cu mm with 2, 0, and 17 neutrophils, and with 13, 5 and 9 lymphocytes respectively. Sugar, chlorides, and pressure were

within normal limits. Total protein was 170, 130, and 76 mg per 100 ml. Cultures of the cerebrospinal fluid for mycobacteria and fungi were negative. Skull roentgenograms were unrevealing. An electroencephalogram showed changes suggestive of a diffuse rather than a local process. On April 24, a biparietal trephine ventriculogram was performed. Findings suggested a tumor of the posterior fossa with obstruction of the aqueduct. This was followed immediately by suboccipital craniotomy and exploration of the cerebellum revealed only calcified arachnoid. On June 27, a Torkildsen procedure was done to relieve obstructive hydrocephalus.

In August he developed a pneumonic consolidation in the right upper lobe and *Klebsiella* - *Aerobacter* organisms were recovered from his sputum. The pneumonia did not respond to appropriate antibiotic therapy.

Although his sputum converted to negative within three months while under antituberculosis therapy, his condition remained precarious. Prednisone and adrenocorticotropin were added to the regimen with no effect on his progress. His general condition continued to deteriorate and he expired Oct. 6. Permission for post-mortem examination was refused. The cause of death was attributed to increased intracranial pressure.

### Bacteriologic Findings

Mycobacteria from our patients were grown on Lowenstein-Jensen medium at 37° C. Colonies were produced in from two to six weeks. Mycobacterial strains were of one type, Group I, *M. kansasii*. Young cultures invariably produced a bright yellow color after exposure to light. The organisms grew both at 37° C and room temperature. The niacin test was uniformly negative on all isolates and catalase activity was vigorous. Loose cording was produced after growth in Dubos or Proskauer-Beck liquid media from cultures isolated from patients

Table 2  
DRUG SUSCEPTIBILITY STUDIES OF PATIENT STRAINS  
OF MYCOBACTERIUM KANSASII FROM SPUTA  
AND LUNG TISSUE

| Antituberculosis<br>Drug            | Conc. in<br>ug/ml | Case 1 |    |   | Case 1* |    |   | Case 2 |    |   | Case 3 |    |   |
|-------------------------------------|-------------------|--------|----|---|---------|----|---|--------|----|---|--------|----|---|
|                                     |                   | S      | MR | R | S       | MR | R | S      | MR | R | S      | MR | R |
| Streptomycin -----                  | 10                | x      | -  | - | -       | -  | x | x      | -  | - | -      | -  | x |
| Isoniazid -----                     | 1                 | x      | -  | - | x       | -  | - | -      | -  | x | -      | -  | x |
| Para-amino-<br>salicylic acid ----- | 10                | -      | -  | x | -       | -  | x | -      | -  | x | x      | -  | - |
| Cycloserine -----                   | 20                | -      | x  | - | -       | -  | x | x      | -  | - | x      | -  | - |
| Pyrazinamide -----                  | 20                | -      | -  | x | -       | -  | x | -      | -  | x | -      | -  | x |
| Viomycin -----                      | 10                | -      | -  | x | -       | -  | x | -      | -  | x | -      | -  | x |
| Viomycin -----                      | 100               | x      | -  | - | -       | x  | - | x      | -  | - | x      | -  | - |
| Thiomide -----                      | 5                 | -      | x  | - | -       | -  | x | x      | -  | - | x      | -  | - |
| Kanamycin -----                     | 10                | -      | x  | - | -       | -  | x | -      | x  | - | -      | x  | - |

\*—resected lung specimen

S—susceptible

MR—moderately resistant

R—resistant

in cases 1 and 2, but cord formation was absent in cultures from the third patient. The results of susceptibility tests on each patient-strain isolated from sputa prior to therapy and from one resected lung specimen are presented in table 2.

Guinea pig inoculations were done with cultures isolated from sputa and resected tissue. When the animals were sacrificed they revealed no progressive disease. Smears of macerated portions of lung and splenic tissues were negative, while smears of the liver and pancreas disclosed several large, beaded, acid-fast bacilli.

### Discussion

Atypical tuberculosis or mycobacteriosis caused by the unclassified acid-fast bacteria is similar to classical tuberculosis in its clinical, roentgenographic and pathologic aspects, differing in epidemiology, bacteriology and drug sensitivity. The correct diagnosis (differentiation) can be made only by careful bacteriologic studies.

The histories of patients with atypical tuberculosis revealed a high incidence of associated pulmonary disease although the significance of this relation is not clear. This may be accounted for by a greater incidence of the disease in the above-40 age group. It has been reported that the symptoms are less severe and the course is more benign than that found in tuberculosis.<sup>5, 16, 19</sup> The

clinical findings in our cases to date were in no way different from those to be expected in patients with typical tuberculosis of equal extent. The abnormalities observed on chest roentgenograms vary from minimal to far advanced and may or may not correlate with the symptoms.

Precaution must be taken in the interpretation of standard PPD tuberculin skin tests. A positive test does not always mean a *M. tuberculosis* infection nor does a negative test necessarily rule out mycobacterial disease. Patients with atypical tuberculosis rarely react to the weaker dilutions of standard tuberculin PPD. It has been suggested that tuberculin skin tests might be useful in separating infection caused by the various mycobacteria. Cross reaction is great enough to indicate that the specific PPD tests alone cannot be used as differential diagnostic tests. However, such tests do show that there is a close antigenic relationship between the mammalian tubercle bacillus and Group I Photochromogens and that a larger reaction is often elicited by the homologous PPD.

The most striking clinical feature of atypical tuberculosis is the lack of response to antituberculosis drug therapy.<sup>1, 3, 4, 16, 17</sup> The slow rate of improvement and the failure of sputum conversion certainly makes one question the value of drug therapy in the treatment of this disease. Some patients



may heal spontaneously. Surgical resection in the absence of rather prompt sputum conversion is recommended although not always successful. In our experience, the results from surgery were better than with chemotherapy alone.<sup>1</sup>

It is no longer permissible to assume that the identification of acid-fast bacilli as *M. tuberculosis* can be made solely from smear and culture of clinical material.<sup>1-17</sup> Only by using a series of bacteriologic tests can they be identified or distinguished from other mycobacteria. While definitive tests are lacking in differentiating medically important mycobacteria and in particular the unclassified organisms, there are a number of procedures which are helpful in grouping mycobacteria. Such procedures include: 1. variation in pigment production when exposed to light;<sup>5</sup> 2. variation in rate of growth at different temperatures;<sup>5</sup> 3. the niacin test;<sup>35</sup> 4. catalase and peroxidase activity;<sup>36-38</sup> 5. microneutral red and cording test;<sup>39</sup> 6. drug susceptibility tests; 7. guinea pig inoculation; 8. antigen-antibody reactions;<sup>29</sup> 9. phage typing;<sup>40, 41</sup> 10. tissue cultures;<sup>42</sup> and recently the phenolphthalein sulfatase test.<sup>43</sup> Of these procedures, the niacin test appears to be the most helpful preliminary test for differentiating unclassified mycobacteria (which give a negative test) from *M. tuberculosis* which gives a positive test.

The natural history of this disease has not yet been completely elucidated. Evidence for person-to-person communicability has not been demonstrated and the disease is not considered contagious. Isolation precautions employed for open tuberculous patients is therefore unnecessary, but it is recommended that segregation from tuberculous patients be adopted to prevent superinfection with *M. tuberculosis*. It is presumed that infection takes place from environment to man as in histoplasmosis. Unclassified mycobacteria have been isolated from soil, water, house dust and raw milk.<sup>44</sup> It is possible that these acid-fast bacilli may live a saprophytic existence in the body until susceptibility of the host is lowered to such a degree that the organisms are able to produce disease. It is also possible that the host

may require contact of long duration with large number of organisms before disease becomes clinically evident.

### Summary

Three cases of atypical pulmonary tuberculosis are presented with their symptoms, diagnosis, and treatment. The literature of the unclassified mycobacteria and of their relationship to chronic pulmonary disease is reviewed.

All sputum cultures in our patients produced Group I, *M. kansasii*; none yielded *M. tuberculosis*. A series of six bacteriologic procedures were used to distinguish these mycobacteria from *M. tuberculosis*.

In case 1 the patient's sputum converted as a result of surgery, while in cases 2 and 3 sputum conversions resulted from chemotherapy or conversion might have been spontaneous. The third patient in our series died from increased intracranial pressure from an obscure central nervous system disease. Patients with atypical tuberculosis still remain a problem.

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## ABSTRACT

Elston, H. R.; Meiberger, M.; Kleitsch, W. P., and Parrillo, O. J.: Atypical tuberculosis caused by unclassified mycobacteria. *Nebr SMJ*.

Three patients with atypical pulmonary tuberculosis are reported in regard to symptoms, diagnosis and treatment. All sputum cultures produced Group I *Mycobacterium kansasii*; none yielded *M. tuberculosis* or fungi. While cross tuberculin reactions were

observed among the three antigens employed, standard PPD, PPD-Y (*M. kansasii*) and PPD-B (Battey antigen), reaction was greater with the homologous PPD in two patients. Responses to antituberculosis drugs are poor when compared with tuber-

culosis caused by *M. tuberculosis*. Isolation techniques are not required, since evidence for person-to-person communicability is lacking. However, it is recommended that these patients be segregated from those with true tuberculosis to prevent superinfection.

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Forget each kindness that you do  
as soon as you have done it;  
Forget the praise that falls to you  
the moment you have won it;  
Forget the slander that you hear  
before you can repeat it;  
Forget each slight, each spite, each sneer,  
whenever you may meet it.

(Bulletin National Tuberculosis Association,  
September, 1964, p. 7).

# The Statistical Method

**T**HE statistical method is used in medical research and in everyday life to analyze past performance and to predict future events. It is probably the only alternative to the theoretical method, which consists in avoiding what is obviously disastrous; such conclusions, seemingly based on theory alone, are usually themselves the result of statistical analysis. Whether we profess to believe in the statistical method or not, we live our lives by it. The statistical method consists first in analyzing a group of experiences; second, in equating the population examined to the general population; and finally in assuming that what has happened before will happen over and over again. It is probably the only method we have, but it may on occasion be something less than perfect. Where cause and effect are sought, correlation is given instead. Where a figure is wanted to establish correlation, it is supplied by methods that may or may not be accepted. And, lastly, it has led to controversy and to erroneous conclusions.

One statistical study showed that waking after thiopental anesthesia is accelerated by pentylenetetrazol; another concluded that it is not. Statistical analysis in some hands suggest that cigaret smoking causes cancer of the lung; in other hands, that it does not. Statistical methods seem to have gone astray in predicting the outcome of the Roosevelt-Landon presidential contest, and again in the case of Truman and Dewey. One study purported to show that soap was generally sterile, while another concluded that it was not. It has long been customary to lower the patient's head in shock, or more properly, when the (systolic) blood pressure falls. Another study suggests that raising the head may be proper. Heat is applied by some for superficial pain; others use cold. It is quite possible that both are helpful; it is also possible that neither cold nor heat do any real good. Vasoconstricting agents have been administered for years in the treatment of (primary) hypotension. A recent study

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indicates that vasodilating drugs are preferable. In treating shock, we have several things to consider. We must decide if there is such a thing as "shock," and we must define the word. We must distinguish shock from hypotension. We must diagnose primary and secondary hypotension, and determine the cause. We must decide what we mean by "blood pressure." We may have in mind systolic or diastolic (or mean) blood pressure, and we may be thinking of the pressure in the upper or in the lower extremity. When the patient's head is lowered, it will commonly rise in the arm (where it is measured), but it will fall in the leg, and it is quite possible that the patient's condition is unimproved while we record higher and higher blood pressure values. We must finally decide whether we are trying to raise the patient's blood pressure or to save his life. An experiment dealing with shock may have either of two end-points: a significant increase in blood pressure or a lowering of the mortality rate. The first is more easily obtained, but may be without significance. The two may be synonymous, but it is entirely possible that they are not. Muscle-relaxant "A" has been shown to excel "B" (and others) in regard to respiration-sparing as a result of one study, and "B" has been shown to surpass "A" in another. Some workers believe, at the time of this writing, that halothane anesthesia is associated with, or is responsible for, a large degree of liver damage (and death), and others, with exactly the same information available to them, do not.

It is difficult to know what to believe. If



drug "A" is shown to be better than "B" in what is apparently a properly conducted study, what are we to do with a later equally good study that reaches another conclusion? If we accept the second study, it may be only because it is second. The second worker, having counted his cases, is then in the position of his readers, and must also consider the first study as he offers the results and conclusions of his own. Where one study reaches a conclusion opposite to that obtained by an earlier one comprising an equal number of cases, we are left in a quandary. Clearly, something has gone wrong. One of the studies was improperly done or there is something wrong with the statistical method. If we attach equal importance to each study and add all the cases in the two series, the results will cancel themselves out, and we are left with no conclusion at all.

Where the statistical method has been criticized, too often it has been slandered by those who do not understand it. The usual pitfalls cited with glee by the uninformed are very well known to the expert. On the other hand, where the method has failed, the fault has commonly been ascribed to errors in technique, and not to the method itself. Incorrect predictions in the two presidential elections were quickly ascribed to sampling errors.

If we truly have selected a random population, and if our technique has been proper, are we always justified in assuming that what has been shown to have happened in the past will happen in the future? If we are counting cases of vomiting in order to evaluate a method or an agent, we have first to define the cases we are going to count. A patient with projectile vomiting clearly belongs in the "plus" column, and an obviously calm and uncomplaining patient does not. But in between, there will be those who have a little of what may be called emesis and may just as easily be called anything else. It may become necessary, for the purpose of including or excluding cases, to measure the volume of emesis, and as this is not ideally practicable, and since the majority of cases may fall into a poorly defined group, the entire study may come to nothing. Counting

cases of nausea is even more difficult, and unless the series is quite large and statistical methods above reproach, such a study may prove to be impossible. If a patient is asked, during postoperative rounds, if he has any complaints, he may say that he has none; if he is asked whether or not he has had nausea, he may reply quite differently. It is difficult to know where to put this case in the series, and even what question to ask. It has been shown further that different answers may be obtained by different workers asking the same question. Obviously, a study that begins with "what we set out to show" has reached its conclusion before it began, and is doomed from the start.

Statisticians have selected the value of  $1/20$  as distinguishing probability from improbability; any other amount will do, the exact number is not important. It is possible to throw a million heads in a row (and for apes to type Shakespeare), but it is unlikely that it will be done, and this remote possibility is easily expressed by a mathematician. As likelihood becomes more remote so does the statistician reject it. Somewhere he equates probability with belief and improbability with disbelief. He must do this to provide his work with meaning; he has selected this as the place. Unfortunately, this is often denied, but where a practical solution to a problem is sought, this is what is offered. It is important for us to remember, further, that case-counting establishes correlation and never, no matter how overwhelming the statistical evidence and how great the index of probability, cause and effect. The statistician who stops smoking does so illogically, since he cannot reasonably persuade others to do so. If he does not stop, he is in no better position, his figures have come to mean nothing to him. Shall we administer pentylenetetrazol? Shall we put the patient's head down? Shall we stop smoking? If we do not know, what have we accomplished? What is correlation, and of what use is it? The statistician may smile tolerantly and say smugly that the evidence is overwhelming, but he is apt to retreat when asked for advice. If he insists that we attempt to produce cancer with cigarettes, then we do not need his statistical evidence

of "correlation." Correlation is either proof or it is not, and if it is not, then all the correlation in the world has not the slightest value and cannot tell us what to do.

In exploring the unknown, the statistical method seems the only logical approach to a solution, and we have always assumed, and shall continue to assume that, under the same set of conditions, what has happened before will happen again. At the same time, the following suggestions are put forth.

- (1) What is sought must be important.
- (2) Terms must be defined with utmost clarity.
- (3) Semantic errors, which can destroy the value of a study, must be scrupulously avoided.
- (4) The number of cases in a series must be large. It would not seem

fruitful to inquire of only thirty patients if they had nausea.

- (5) The conclusion must not be known before the study has started.
- (6) Psychological and emotional factors must be removed before results can be analyzed.

Far too many studies are improperly set up (perhaps too many are done), where the worker is overly enthused, where any sort of answer may be obtained from the patient, where the end-point is not clearly understood (is it "good" to lower the patient's head?), and particularly where the series is much too small. Some studies appear to be of little importance; what is one to do with the information that drug "A" is 1% better than drug "B"? The statistical method is what we will always use, but it must be used wisely.

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"A report from one large center on mortality in more than 9,000 major operations on the digestive and urogenital tracts showed a decrease of 60 per cent between the periods 1930 to 1943 and 1944 to 1957. During the last five years of this series, the surgical mortality rate was consistently below 1 per cent. In another study, surgical mortality for duodenal ulcer was reduced in a single decade by more than one-half to a level of about 1 per cent." (Editorial, New York J Med, July 1, 1964)

# Neurologic Manifestations of Hypoxia

**T**HE human brain is the first organ to demonstrate impaired function in hypoxic states. It is usually the organ most severely and even permanently affected.

The origins and consequences of hypoxia rise amid, and are the concern of, a number of specialties, particularly:

Aeropsace Medicine  
Anesthesiology  
Cardiology  
Forensic Medicine  
General Surgery  
Industrial Medicine  
Neurology and Neurosurgery  
Obstetrics  
Pediatrics  
Thoracic and Cardiovascular Surgery  
Toxicology and Pharmacology

## Part I

### GENERAL INFORMATION

While the *manifestations* of hypoxia are largely neurologic, the *origins* arise commonly (not invariably) in other systems or functions.

#### Etiology<sup>1-7</sup>

In a given patient, the cause of hypoxia may be single or it may occur in the compounding of several factors each alone insufficient to produce significant lack of oxygen. The cause may be obvious or obscure. The apparent cause in itself may not result in perilous hypoxia but it may set off secondary hypoxic-producing defects as laryngospasm, pulmonary edema, grand mal convulsions, apnea, cerebral edema or, most lethal of all, cardiac arrest.

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A listing of etiologies of oxygen deprivation starts outside the patient in the air he breathes, then through his transport systems to arrive at the ultimate site of cellular oxidation.

The following outline is an attempt to classify etiology of hypoxia at its anatomic-physiologic origin. Etiologies may be multiple or may overlap; one may trigger off another.

#### Outline of Causes of Cerebral Hypoxia

1. Diminished partial pressure of oxygen in ambient air<sup>8</sup>
  - Altitude
  - Entrapment (air tight)
  - Deep holes, wells, caves, mines, silos, (oxygen displaced by heavier gases).
  - Wrong mixtures and other technical errors in anesthesia, diving.
  - Artificially deficient atmosphere in laboratory, industry (e.g. room or tank full of nitrogen, methane, helium).
2. Obstruction of respiratory pathway (oral, nasopharyngeal, pharyngeal, laryngeal, tracheal, bronchial, bronchiolar).<sup>9, 10</sup>
  - Plastic bag over face. Pillow suffocation. Buried alive. Drowning.
  - Micrognathia
  - Atresia of nasal choanae
  - Tongue in comatose states
  - Food bolus, foreign bodies
  - Injury, edema, hemorrhage
  - Hanging, strangulation
  - Laryngeal spasm
  - Bilateral vocal cord paralysis
  - Aspiration of vomitus, saliva, nasopharyngeal secretions, water
  - Diphtheria
  - Infectious croup (infants)
  - Positioning of comatose patient
  - Excessive tracheobronchial secretions, mucosa swelling
  - Bronchospasm; status asthmaticus
  - Airway obstruction in anesthesia; technical errors
  - Esophageal atresia; esophageal-tracheal fistula
  - Compression by mass lesion



3. Impairment of pulmonary tissue<sup>11</sup>
  - Any mass lesion or diffuse parenchymal disease which significantly impairs total oxygen transport through alveoli, to pulmonary veins.
  - Congenital defect, immaturity, hypoplasia
  - Hyaline membrane disease
  - Atelectasis
  - Cystic disease (congenital)
  - Injury, surgery
  - Pneumothorax, hemothorax, pleural effusion
  - Mediastinal emphysema
  - Intrapulmonary hemorrhage
  - Pneumonia, pneumonitis, pulmonary edema
  - Heart disease (pulmonary stasis)
  - Advanced emphysema
  - Chronic fibrosis, alveolar-capillary block, Hamman-Rich syndrome
  - Alveolar proteinosis
  - Sarcoidosis
  - Tuberculosis
  - Diffuse connective-tissue disease
  - Primary pulmonary hemosiderosis
  - Chronic irritants, as beryllium; asbestosis, pneumoconiosis
4. Impairment of thorax, diaphragm (bone, muscle)<sup>12</sup>
  - Injury, surgery
  - Congenital defect
  - Advanced kyphosis, scoliosis, gibbus
  - Positioning of comatose patient
  - Diaphragmatic hernia
  - Massive subdiaphragmatic distention
  - Persistent singultus
  - Massive (physiologic) abdominal splinting (following upper abdominal surgery)
  - Disease of muscle
    - Muscular dystrophies
    - Polymyositis
    - Dystrophia myotonica
  - Constricting bandages, casts
  - Great obesity
5. Impairment of central respiratory connections (medulla, upper spinal cord)<sup>13</sup>
  - General anesthesia
  - Medications
  - Exogenous toxic agents
  - Hypoxia
  - CO<sub>2</sub> narcosis (respiratory acidosis)
  - Breath-holding (infants)
  - Supramedullary, bilateral cerebral disease plus hypocapnia
  - Hypocapnia plus underwater swimming
  - Electrocution, lightning
  - Congenital defects, inadequacy, immaturity of newborn
  - Hypothermia (especially if profound and in children)
  - Hypoglycemia (severe, prolonged)
  - Kernicterus
- Intracranial injury or disease with edema or compression spreading to brainstem, upper cord (note also that cerebral edema is not unusual following severe hypoxia)
- Brainstem or upper cord disease, injury
  - Amyotrophic lateral sclerosis
  - Poliomyelitis
  - Syringobulbia, — myelia
  - Vertebral or basilar artery stenosis, occlusion
  - Hematomyelia
  - Myelitis, encephalitis (brainstem)
  - Neoplasm, tuberculoma, abscess
  - Basilar invagination
  - Klippel-Feil deformity
- Tetanus
- Grand mal convulsions (particularly in status epilepticus)
6. Peripheral neuromuscular respiratory disorder<sup>14</sup>
  - Injury or disease of phrenic nerves, or nerves to thoracic muscles
  - Infectious polyradiculitis (Guillain-Barre) or Landry's syndrome
  - Diphtheritic polyneuritis
  - Acute intermittent porphyria
  - Botulism
  - Myasthenia gravis
  - Curarization
  - Cholinergic toxicity and other poisons
    - Soluble barium salts
    - Nicotine
    - Parathion
    - Quarternary NH<sub>4</sub> compounds
  - Potassium excess, deficiency
  - Rapid absorption of large doses of neomycin, particularly under anesthesia. Streptomycin and other antibiotics suspect also.
7. Impairment of hemoglobin transport
  - Hypovolemia
    - Hemorrhage
    - Great transudation of fluid as in burns
  - Anemia
  - Carbon monoxide poisoning
  - Methemoglobinemia
  - Incompatible blood transfusion
  - Severe physical exertion or convulsion lead to oxygen deficit
  - Positioning hazards with comatose patient; peripheral pooling of blood
8. Impairment of general circulation<sup>15</sup>
  - Cardiac "arrest"
    - Asystole, ventricular fibrillation, ventricular flutter, severe tachycardia, severe bradycardia
  - Cardiac injury, surgery
  - Congestive failure
  - Congenital heart disease, shunts
  - Ball-valve thrombus, air embolism (intracardiac)

Aortic stenosis

Rapid changes in pH

Various causes of hypotension, circulatory syncope, physiologic shock

Stroke volume of heart

Heart rate

Arterial tonus

Venous return

(Less significant alterations often aggravated under anesthesia)

Pulmonary embolism

Advanced cirrhosis of liver (hypoxemia)<sup>16</sup>

Positioning hazards with comatose patient may obstruct venous return

Hyperventilation, then Valsalva maneuver

Hazards to fetal circulation:

Maternal hypoxia

Cord or placental impairment

Prolonged uterine contractions

9. Impairment of circulation to brain<sup>17</sup>

Occlusion of aortic orifices

During heart surgery

Takayasu's disease

Dissecting aneurism

Injury, obstruction of neck arteries

Hanging, strangulation

Centrifugal (gravitational) force, caudad

Positioning hazards with comatose patient (e.g., head up with critical hypotension)

Hypocapnia (cerebral vasoconstriction)

Sicklelema, falciparum malaria, trypanosomiasis, multiple emboli (including fat or air)

Acute increased intracranial pressure

Obstruction of venous return from brain

Congestive heart failure

Polycythemia vera

Superior vena cava obstruction (especially acute)

Heart surgery

Crushed chest (acute)

Centrifugal (gravitational) force, cephalad

Strangulation

Bilateral radical neck dissections

10. Alteration of neuronal oxidative systems<sup>18</sup>

Inactivation (oxygen cannot be used by neurones)

Cyanide poisoning (ties up cytochrome oxidase)

Hypoglycemia

Water intoxication (?)

H<sub>2</sub>S inhalation in high concentration

Anesthetics (? tie up dehydrogenase enzyme)

Hyperactivation (increases basal neuronal oxygen requirement for survival)

Pyrexia

Hyperthyroidism

Convulsions

Strenuous muscular activity

## Symptoms<sup>19</sup>

The clinical manifestations of hypoxia are predominantly cerebral. Myocardium and kidneys appear next most susceptible.

As with most alterations of function, hypoxia will manifest itself according to its

Severity

Suddenness of onset and evolution

Duration

In mild to moderate form of gradual evolution, hypoxia reveals a clinical picture similar to that seen with slowly developing hypoglycemia, alcoholic intoxication or anesthesia. The "stages" are comparable and may progress even to coma or death.

With slow, progressive induction of hypoxia, one discerns in the *complete* syndrome:

1. Initial symptoms—

Lightheadedness or vertigo

Headache

Lassitude, drowsiness

Malaise, weakness

Dyspnea on exertion

Anorexia, nausea

Tachycardia

Hypertension

Insomnia

Memory impairment

Reduced concentration, perseverance for mental tasks

Reduced visual, auditory, somesthetic acuity (night vision is a very sensitive indicator of hypoxia).

Slowed reaction time

Emotional changes

Paresthesias

Neuralgias

2. More pronounced mental and neurologic deficits (variable)—

Marked emotional changes

Impaired judgment

Catatonic phenomena

Excitement

Progressive lethargy

Amnesia

Loss of motor skills (e.g., handwriting deteriorates)

Fluctuating but progressive organic mental syndromes

Ataxia

Diplopia

Amaurosis

Motor phenomena: twitching, tremor, weakness, spasticity

3. Unconsciousness supervenes—
  - Trance-like states
  - Progressive loss of consciousness
  - Hypotension, cyanosis, bradycardia, gasping respiration
  - Sudden coma
  - Coma accompanied or followed by convulsive syncope (this is more commonly a feature of rapidly induced hypoxia)
  - (Some individuals descend insidiously to coma, others only after a stage of excitement)
4. Progressive narcosis—
  - Respiratory failure
  - Death

With rapid induction of hypoxia, the above "stages" are not permitted expression and coma rapidly develops. Cardiac arrest may occur to compound the insult. The following clinical picture appears:

1. A very brief episode of confusion, amnesia
2. Sudden loss of consciousness
  - Posture maintained
  - Fixed eyes and posture
  - Eyeballs roll up
  - Respiratory arrest
3. Failing posture
  - May be briefly intermittent
4. Convulsive syncope (hypoxic convulsion)
  - Occurs with or shortly after loss of consciousness
  - Generalized loss of muscle tonus punctuated by severe clonic jerks of head and upper extremities, extensor jerks of legs.
  - Decerebrate posture.
  - Prompt recovery without sequelae if cause of hypoxia immediately removed.

There is a great individual variability in tolerance for hypoxia and manifestations particularly in slow induction. This is demonstrated particularly on high altitude tests, for some individuals note subjective discomfort at 5000 feet. Most persons will note some symptoms only at altitudes over 7000 feet and occasional ones are symptom-free at 15,000 feet (without acclimatization). There is no correlation between arterial oxygen saturation and the presence, number and severity of symptoms in these persons.

Acclimatization may occur which allows some individuals to live and work at elevations near 15,000 feet.

Cyanosis is a *late* manifestation of hypoxia, appearing when there is approximately five gm. reduced hemoglobin per 100 ml

capillary blood. Cyanosis does not appear with CO or cyanide intoxication.

The signs and symptoms of hypoxia are hardly "specific." Without clues concerning a particular etiology of hypoxia, the nature of the problem may be missed (this has been so with CO intoxication, for example). The presence of hypoxia may be obscured during anesthesia, in the postoperative (recovery) state, in the debilitated or acutely sick patient.

The effects of minimally significant (or "lowgrade") hypoxia may be aggravated by metabolic acidosis, alkalosis, CO<sub>2</sub> retention, hypocarbia, marked electrolyte disturbances, water-intoxication, severe dehydration, pyrexia, severe exertion or hypoglycemia.

In the fetus, hypoxia is usually manifested by bradycardia and increased fetal activity. Meconium stained amniotic fluid often indicates hypoxic distress.

If the cause of hypoxia is removed before death, one notes subsequently:

1. Coma with apparently complete recovery;
2. Coma with variable recovery accompanied by transient or permanent disability (neurologic, cardiac, renal);
3. Continued coma, then death within several hours or days;
4. Prolonged coma with delayed death (after many days or weeks);
5. Delayed (recurrent) coma or "relapse" following No. 1 or No. 2 above.

### Sequelae<sup>20</sup>

Most patients appear to recover remarkably from hypoxia or they die. Death, in the last analysis, is due usually to failure of medullary centers. This may occur as a direct result of the original cause of hypoxia, or not uncommonly from *secondary* effects, particularly cardiac arrest which adds catastrophically to the original hypoxia. Thus, there are three groups for consideration:

1. Those in whom all neuronal impairment is transient and good restitution occurs on resuscitation.
2. Those in whom all neuronal impairment is severe.
  - Medullary centers affected to fatal degree.
3. Those lying between the above two, with permanent neuronal damage but insufficient medullary center involvement to produce death. Cerebral deficits remain.



The last group consists commonly of patients who almost died, who were resuscitated with great difficulty.

Sequelae are commonly evident on restoration of consciousness and thereafter. Less often they may appear belatedly, after a period of seemingly total recovery. Such delayed deterioration occurs particularly following CO intoxication but has been reported with other forms of severe hypoxia.

The patient recovering from hypoxia but remaining stuporous may relapse from inattention to the many hazards and untoward occurrences notorious in stuporous states (as stasis, swallowing tongue, hypoventilation, aspiration).

From mild or moderate hypoxia of brief duration, patients usually recover consciousness quickly and with few and brief subjective distresses. From more severe or prolonged hypoxia, patients commonly return to normal functioning by repeating backwards the several clinical "stages" of induction described above, with organic mental deficits,

cerebral sensori-motor phenomena, excitement or lethargy, thence to gradual recovery. In those more seriously affected, recovery may be prolonged or permanent deficits remain. Among prolonged or permanent sequelae are the following in various degrees of severity, alone or in combinations:

- Aphasia, agnosia, apraxia, acalculia
- Central visual loss
- Convulsive disorder
- Intention myoclonus<sup>21</sup>
- Basal ganglia syndromes: Parkinsonism, tremors, dystonia, chorea, athetosis
- Intellectual defects
- Organic psychosis with almost any psychiatric configuration
- Frontal lobe deficit
- Spastic paresis, paralysis
- Neurotic adjustments to aftermath
- Dysarthric or slurred speech
- Ataxia (cerebellar deficits)
- Myelopathy
- Neuropathy: most commonly associated with CO intoxication. Also from pressure while comatose.

#### END OF FIRST INSTALLMENT

(To be continued)

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#### CONFLICTS IN HUMAN REPRODUCTION

"Turning briefly to another conflict of reproduction is that of world over-population which cannot be dispelled lightly. Without question, predictions based on past reproductive experience, have created alarming and inescapable facts which will soon become a reality . . ." (Mattingly, R. F.: Editorial "In Defense of the Fetus." *Marquette Medical Revue* 10:72, March, 1964).

## Coming Meetings

### CRIPPLED CHILDREN'S CLINICS—

- January 16 — Lexington, High School Building
- January 30 — Wayne, Wayne State Teachers College
- February 6 — Scottsbluff, St. Mary's Hospital
- February 20 — Grand Island, St. Francis Hospital

CLINICAL CONFERENCE, Diabetes in Review — January 20-22, Hotel Drake, Chicago. Info, American Diabetes Association, 18 East 48th Street, New York, N.Y. 10017.

### AMERICAN COLLEGE OF CHEST PHYSICIANS POSTGRADUATE COURSES COMING UP—

Recent Advances in the Diagnosis and Treatment of the Heart and Lungs; Hotel Fontaineblau, Miami Beach, February 1-5, 1965.

Registration is limited and tuition fee charged.

AMERICAN COLLEGE OF CARDIOLOGY, 14th Annual Meeting — February 17-21, 1965, Boston, Statler Hilton Hotel.

BOARD OF COUNCILORS — Nebraska State Medical Association — Mid-Winter Meeting, Sunday, February 21, 1965, Fort Kearney Hotel, Kearney.

CONTINUING EDUCATION FOR PHYSICIANS — Obstetrics and Gynecology, Eppley Cancer Research Institute, January 21 and 22, 1965. Course Coordinator: Warren H. Pearse, MD.

COLORADO MEDICAL SOCIETY, 30th Annual Session — February 23-26, 1965, Hilton Hotel, Denver. For details, write the society at 1809 East 18th Avenue, Denver 80218.

HOUSE OF DELEGATES — Nebraska State Medical Association Mid-Winter

Meeting, Saturday and Sunday, February 27 and 28, 1965, Fort Kearney Hotel, Kearney.

ELEVENTH ANNUAL JOINT SECTIONAL MEETING, American College of Surgeons and Nurses — Seattle, March 8-11, 1965. For details contact Dr. James H. Spencer, 55 East Erie St., Chicago 60611.

1965 NATIONAL MEDICOLEGAL SYMPOSIUM — Sponsored by the AMA and the ABA; Dunes Hotel, Las Vegas, March 11-13, 1965. First such meeting jointly sponsored. Registration cards may be obtained by writing Mr. Robert M. Throckmorton, general counsel, AMA, 535 North Dearborn Street, Chicago, Illinois 60610.

17TH ANNUAL TEACHING SEMINAR— At the Jung Hotel, New Orleans, March 13th through 18th, 1965.

12th ANNUAL MEETING OF THE MID-CENTRAL STATES ORTHOPAEDIC SOCIETY — March 25-27, 1965, at the Velda Rose Towers, Hot Springs, Arkansas.

AMERICAN INDUSTRIAL HEALTH CONFERENCE — April 5-8, 1965; American Hotel, Bal Harbour, Miami Beach, Florida, Industrial Health Conference, 55 East Washington Street, Chicago, Ill. 60602.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS — Interim meeting; Dallas, Texas; April 21-25, 1965.

THE 14TH HAHNEMANN SYMPOSIUM titled "Mechanisms and Therapy of Cardiac Arrhythmias" will be held at the Sheraton Hotel, Philadelphia, April 26-29, 1965. Contact Leonard Dreifus, MD, Program Director, Hahnemann Medical College and Hospital, 230 North Broad Street, Philadelphia 19102.

PUBLIC HEALTH AND MEDICAL, CHEMICAL AND BIOLOGICAL DEFENSE COURSE — To be given at the U. S. Army Chemical School at Fort McClellan, Alabama, on April 26-30, 1965.

THE ANNUAL MEETING OF THE  
AMERICAN ACADEMY OF PHYSICAL  
MEDICINE AND REHABILITATION —  
Will be held on August 22-27, 1965, at  
the Sheraton Hotel, in Philadelphia.

FIRST NATIONAL CONFERENCE ON  
AREAWIDE HEALTH FACILITIES  
PLANNING, AMA — Americana Hotel,  
Bal Harbour, Florida, November 28-29,  
1964.

Future Meetings of the American  
College of Surgeons—

— 1965 —

ATLANTA, GEORGIA, January 25-27 —  
Sectional Meeting. Dr. Duncan Shepard,  
Local Chairman. Atlanta Biltmore Hotel.

PHILADELPHIA, PENNSYLVANIA, Feb-  
ruary 15-17. Sectional Meeting. Dr.  
George P. Rosemond, Local Chairman.  
Bellevue-Stratford Hotel.

SEATTLE, WASHINGTON, March 8-11.  
Annual 4-Day Sectional Meeting for Doc-  
tors and Graduate Nurses. Olympic Ho-  
tel and nearby hotels. Dr. Edward B.  
Speir, Local Chairman for surgeons' pro-  
gram. Elizabeth Giblin, RN, Local Chair-  
man for nurses' program.

ANNUAL CLINICAL CONGRESS, October  
18-22, 1965, Atlantic City, New Jersey.

— 1966 —

BAL HARBOUR, FLORIDA, January 13-  
15. Sectional Meeting. Americana Hotel.

HOUSTON, TEXAS, January 31 - February  
2. Sectional Meeting. Sheraton-Lincoln  
Hotel.

CLEVELAND, OHIO, March 14-17. Annual  
4-Day Sectional Meeting for Doctors and  
Graduate Nurses. Sheraton-Cleveland and  
nearby hotels.

ANNUAL CLINICAL CONGRESS, Octo-  
ber 10-14, 1966. San Francisco, Cali-  
fornia.

For any advance information address:  
Secretary, American College of Surgeons, 55  
East Erie Street, Chicago, Illinois 60611.

## THE MONTH IN WASHINGTON

The Food and Drug Administration has  
started enforcing the prescription drug ad-  
vertising provisions of the new law.

Sales of ethical drugs are now exceeding  
\$2 billion a year in the United States. The  
Bureau of the Census reported ethical drug  
sales at \$2.05 billion in 1963, the first year  
that they had gone over the \$2 billion mark.  
The Pharmaceutical Manufacturers Asso-  
ciation's figure was \$2.39 billion.

The law requires that prescription drug  
advertisements show:

—The "established name" of the drug, if  
one exists, in type at least half as large  
as that used for the brand name;

—The drug's quantitative formula, and

—A true and non-misleading brief sum-  
mary of information about adverse side ef-  
fects, contraindications, and effectiveness  
of the drug for the guidance of physicians.

In enforcing these requirements, FDA  
said it would seek to determine whether  
a fair balance exists between the informa-  
tion on effectiveness and that on side ef-  
fects and contraindications.

The FDA's Bureau of Medicine has start-  
ed monitoring professional journal adver-  
tising for prescription drugs. It will for-  
ward violative advertisements with appro-  
priate recommendations to the FDA Bureau  
of Regulatory Compliance.

Dr. Joseph F. Sadusk, Jr., Medical Direc-  
tor of FDA, said that it is the duty of physi-  
cians to keep fully informed of the com-  
position, mode of action, efficacy and poten-  
tial toxicity of drugs because as the potency  
of drugs increases, "so generally does their  
complexity and their potentiality for harm."

Violations of prescription drug advertis-  
ing will be evaluated in two categories:

—Positive claims or omissions concerning  
the product which present potential danger  
to the patient in varying degrees. Examples  
include omission of some of the pertinent  
side effects, precautions or contraindica-  
tions; improper statements about the effec-



**DOCTOR: WE URGENTLY NEED YOUR OPINION!**

It is of considerable importance to your Journal that the following questionnaire be completed, removed from your journal and mailed to your state medical society as shown below. We urge you to take just a moment for this task, with the assurance that your effort will help us produce a better journal for you.

1. My chief professional interest is general practice ( ) or specialty.....
2. I rate the scientific papers in (name of your journal) .....  
as:  
    ( ) Excellent              ( ) Fair              ( ) Poor
3. I read the **pharmaceutical** advertising in the journal:  
    ( ) Regularly              ( ) Sometimes              ( ) Rarely
4. I have referred to the **local** advertising in the journal:  
    ( ) Often              ( ) Sometimes              ( ) Never
5. Please give the name of **one** local service, firm or institution (professional or commercial) which you have referred to, or purchased from, as a result of seeing its advertising in your journal:  
.....
6. Please list the professional journals you read in order of preference. (You may show your opinion of your state medical journal by its position on this list).  

|         |         |
|---------|---------|
| 1. .... | 4. .... |
| 2. .... | 5. .... |
| 3. .... | 6. .... |
7. When examining your journal do you more often read papers by authors or from hospitals with which you are **personally** familiar, than articles from other sources?  
    ( ) Yes              ( ) No
8. What feature do you like best in your journal?.....  
.....
9. What do you like least?.....  
.....
10. What is missing that you would like added?.....  
.....

PLEASE TEAR OUT AND RETURN TO:  
Editor, Nebraska State Medical Journal  
2900 Jackson Drive, Lincoln, Nebraska 68502



tiveness of, or indications for, the drug or antibiotic; omission of some of the information on various dosage forms, ingredients, or directions for use where required.

—Claims which may or may not involve danger to patient health but which, in the selling message, can seriously mislead as to the proper place of the drug or antibiotic in the total spectrum of products available to meet a specific disease situation.

The American Medical Association and the Food and Drug Administration have warned that two fever and pain-relieving drugs are causing fatal agranulocytosis, a blood disorder, in some patients.

The drugs are aminopyrine and dipyrone, closely related compounds which have been dispensed widely by prescription for many years. Drastic label changes restricting the recommended uses for the drugs were announced by FDA. An editorial supporting the FDA action was carried in the AMA's journal, JAMA.

The FDA ruling was based on case reports collected by AMA and on recommendations of a special committee of medical experts in the fields of hematology, internal medicine, neurology, pediatrics and pharmacology.

Nearly one million more people were admitted to hospitals in the U.S. in 1963 than in the previous year, according to the Health Insurance Institute.

The Institute said that American Hospital Association statistics showed a record 25,267,000 Americans, or one of every seven, were hospitalized last year. This represented an increase of 960,000 over 1962. This meant that each day more than 69,000 persons entered non-federal short-term general and other special hospitals, and that on an average day in 1963 there were 530,000 patients — 2.8 persons per 1,000 population — under hospital confinement.

There were 698,000 beds available for patients in 1963, an average of 3.7 beds per 1,000 population.

The AHA, which includes terminal hospitalizations in its survey, found the average hospital stay for all ages to be 7.7

days. A study conducted by the U.S. National Health Survey, which included federal hospitals, and was based on representative household interviews, put the average hospital stay at 9.4 days. It did not include terminal hospital stays.

The NHS report showed that persons with health insurance protection averaged shorter hospital stays than those with no insurance protection at all. This may indicate, the report suggested, that persons with health insurance protection will seek hospital care more often for diagnosis or for less serious illness than the uninsured.

The number of persons protected by hospital expense insurance provided by insurance companies, Blue Cross, Blue Shield and other health care plans, rose to 145,329,000 by the end of 1963, the Institute said.

Benefits paid by these organizations toward the costs of hospital care totaled \$4,544,000,000, or an average of \$12.5 million a day. Total health insurance benefits amounted to \$7.8 billion.

A Presidential Study Commission has recommended a \$2.9 billion program on heart disease, cancer and stroke.

The research and treatment plan would be built around a network of regional centers designed to learn more about these diseases which cause 70 per cent of American deaths.

The study group was set up by President Johnson in March and commissioned to draw up a blueprint for improving national facilities for fighting these diseases. At present the government is spending about \$220 million in the research and treatment areas covered by the report.

The group urged establishment for a network of regional heart disease, cancer and stroke centers "for clinical investigation, teaching and patient care."

These would be located in universities, hospitals, research institutes and other institutions.

Included would be 25 centers for heart disease, 20 for cancer and 15 for stroke to be established over a five-year period.



The program also would include a second national network of "diagnostic and treatment stations" located in communities throughout the nation. The purpose of this would be "to bring the highest medical skills in heart disease, cancer and stroke within reach of every citizen." This plan envisions over a five-year period 150 stations for heart disease, 200 for cancer and 100 for stroke.

The group also urged "a broad and flexible program of grant support" to stimulate more advanced research efforts in university medical schools, hospitals and other health care centers.

It suggested that the Public Health Service receive \$25 million for such grants the first year which would be raised to \$75 million the fifth year of operation.

The American Medical Association withheld comment on the report for the time being.

"If, however, legislation is introduced in the Congress calling for implementation of the program, the AMA will react at that time," a spokesman said. (From Washington Office, AMA).

## Medicare in Operation

In some of our previous articles we have requested that the physicians participating in the Medicare program in the state of Nebraska, submit their opinions and suggestions which would help us to make this program more successful and more efficient in the handling of their claims.

To date we have had some favorable response from some of the doctors, but we would appreciate and welcome many more.

One helpful suggestion we received from one of the doctors, concerned "Claiming for new born care." He suggested that the Pediatricians ask the Hospital Insurance Department to hold a small supply of physicians blank Medicare forms (1863-2) in order that when a Pediatrician renders new born care at the hospital he can obtain all the necessary information and the signature from the mother in order to file his claim.

## CLINICAL REVIEWS

A program of lectures and discussions on problems of general interest in medicine and surgery.

MAYO CLINIC

and

MAYO FOUNDATION

ROCHESTER, MINNESOTA

Identical Sessions Are Offered on

March 15, 16 and 17

and

March 22, 23 and 24, 1965

Theater — Mayo Civic Auditorium

Rochester, Minnesota

This program is acceptable for credit by the American Academy of General Practice and the College of General Practice of Canada.

The registration fee for this program is \$10.

The number of physicians who can be accommodated is necessarily limited. For this reason identical programs will be offered two successive weeks. The program will be presented first on March 15, 16 and 17 and repeated on March 22, 23 and 24. Those wishing to attend should communicate with M. G. Brataas, Mayo Clinic, Rochester, Minnesota, indicating which session they would prefer to attend.

## CLINICAL REVIEWS

Theater, Mayo Civic Auditorium

Monday, March 15 and 22

### MORNING SESSION

E. W. Johnson, Jr., MD — Moderator

8:30 Welcome

8:35 Osteoporosis, Dr. B. L. Riggs

8:55 Management of Nodular Goiter, Dr. F. R. Keating, Jr.

9:15 Discussion

9:25 Undescended Testes, Dr. A. B. Hayles

9:45 Surgical Management of Undescended Testes, Dr. H. B. Lynn

10:05 Discussion

10:15 Intermission

10:35 Nasal Infections, Dr. C. F. Lake

10:55 Ear Problems Amenable to Surgery, Dr. D. T. R. Cody

11:15 Discussion

11:25 Chemotherapy of Gastrointestinal Cancer, Dr. R. J. Reitemeier

11:45 Management of Urinary Tract Infections, Dr.  
W. J. Martin

12:05 Discussion

#### LUNCHEON

12:20 Heritage Hall, Kahler Room

#### AFTERNOON SESSION

E. W. Johnson, Jr., MD — Moderator

1:30 Practical Clinical Points About Aneurysms,  
Dr. J. A. Spittell

1:50 Aneurysms of the Thoracic and Abdominal  
Aorta, Dr. R. B. Wallace

2:10 Discussion

2:20 Criteria for Selection of Patients for Pitui-  
tary Stalk Section for Diabetic Retino-  
pathy, Dr. C. F. Gastineau

2:40 Oral Manifestations of Systemic Disease, Dr.  
S. A. Lovestedt

3:00 Discussion

3:10 Intermission

3:30 Common Foot Problems in Children, Dr. L.  
F. A. Peterson

3:50 Use of Closed Circuit Television in Diagnostic  
Roentgenology, Dr. C. B. Holman

4:10 "Henchian" Axioms Useful in Rheumatologic  
Diagnosis and Treatment, Dr. J. G. Mayne

4:30 Discussion

#### EVENING

8:00 Panels:

Urologic Problems in Children, Dr. L. F.  
Greene, Chairman

All Aspects of Cancer of the Lung, Dr. D. T.  
Carr, Chairman

Management of Anemia, Dr. A. B. Hagedorn,  
Chairman

8:00 Tour of Mayo Clinic Buildings. Tour groups  
will leave from the Registration Lobby,  
Main Floor, Mayo Building. Wives are  
invited.

#### Tuesday, March 16 and 23

##### MORNING SESSION

W. S. Payne, MD, Moderator

8:30 Oral Contraceptives, Dr. R. A. Smith

8:50 The Use of Posterior Colpotomy in the Diag-  
nosis and Treatment of Selected Gyneco-  
logic Conditions, Dr. J. S. Welch

9:10 Discussion

9:20 Management of Acute Respiratory Failure,  
Dr. R. S. Fontana

9:40 Types of Surgical Treatment and Their  
Rationale in Duodenal Ulcer, Dr. J. C.  
Cain

10:00 Discussion

10:10 Intermission

10:30 Histoplasmosis — A Disease of Increasing  
Clinical Importance, Dr. D. R. Nichols

10:50 Meningitis, Dr. W. E. Wellman

11:10 Gastrin-like Activity in Tumors, Dr. G. A.  
Hallenbeck

11:30 Discussion

11:30 Discussion

12:00 Luncheon — Round Table Discussions

#### AFTERNOON SESSION

W. S. Payne, MD, Moderator

1:30 Medical Management of Chronic Ulcerative  
Colitis, Dr. W. G. Sauer

1:50 Surgical Aspects of Chronic Ulcerative Co-  
litis, Dr. O. H. Beahrs

2:10 Discussion

2:20 Diagnosis and Experimental Treatment of  
Multiple Sclerosis, Dr. N. P. Goldstein

2:40 The Unconscious Patient, Dr. J. E. Thomas

3:00 Discussion

3:10 Intermission

3:30 Functional Voice Disorders, Dr. A. E. Aron-  
son

3:50 Management of Drug Allergies, Dr. G. A.  
Peters

4:10 Current Concepts in the Medical Management  
of Acute Renal Failure, Dr. J. C. Hunt

4:30 Discussion

#### EVENING

8:00 Panels:

Fractures, Dislocations and Sprains\* (Whip-  
lash) of the Cervical Spine, Dr. J. M.  
Janes, Chairman

Office ENT — Diagnosis and Treatment,  
Dr. K. M. Simonton, Chairman

Problems of Adolescence, Dr. J. G. Delano,  
Chairman

#### Wednesday, March 17 and 24

##### MORNING SESSION

E. M. Litin, MD — Moderator

8:30 Ano-Rctal Abscesses and Fistulae, Dr. R.  
J. Jackman

8:50 Vascular Complications Associated with  
Pregnancy, Dr. R. B. Wilson

9:10 Discussion

9:20 Fluothane and the Liver, Dr. Brian Dawson

9:40 Alopecia of the Scalp in Men and Women,  
Dr. S. A. Muller

10:00 Discussion

10:10 Intermission

10:30 Clinical Disturbances of Sleep, Dr. L. F.  
Pilling

10:50 Neurologic Clues to Systemic Diseases, Dr.  
J. P. Whisnant

11:10 Hypersplenism, Dr. R. A. Kyle

11:30 Discussion

12:00 Luncheon — Round Table Discussions

#### AFTERNOON SESSION

1:30 Drug Addiction, Dr. M. J. Martin

1:50 New Developments in Transfusion Therapy,  
Dr. H. F. Taswell

2:10 Discussion

2:20 Parathyroid Disease, Dr. B. M. Black

2:40 Clues to Occult Malignant Disease, Dr.  
J. M. Kiely

- 3:00 Discussion
- 3:10 Intermission
- 3:30 Eye Manifestations of Systemic Disease, Dr. C. W. Rucker
- 3:50 Evaluation of Bleeders, Dr. J. H. Thompson, Jr.
- 4:10 Cor Pulmonale, Dr. D. E. Dines
- 4:30 Discussion

## Doctors and Medicine in the News

Dr. Robert Ellingson Spoke in London and Paris—

Dr. Ellingson was in London from November 16 to 26. He spoke to the staff of the Hospital of Sick Children on "Development of Visually Evoked Responses in the Human." He was in Paris from December 3-5 where he delivered a 20-minute speech titled "Methods of Recording Cortical Evoked Responses in the Human Infant." (From the *Pulse*, Vol. 13, No. 6, November 25, 1964).

## News and Views

Enovid Proved Not the Cause of Thrombophlebitis—

An experiment financed by G. D. Searle & Co., involving 10,000 women who had taken the "pill" for at least 25 months, under the direction of 38 Planned Parenthood Federation clinics, has reached the point at which it may be said Enovid does not increase the likelihood of the pregnant mother having thrombophlebitis.

Legislation Enacted by the 88th Congress, 1963-1964—

In a "Supplement" to *PMA Newsletter*, Vol. 6, No. 47, the PMA has furnished a complete resume of legislation enacted by the 88th Congress, having an interest for medicine or the pharmaceutical industry.

Sales of Ethical Drugs Rising — According to Release from PMA—

Sales of ethical drugs — prescription and over-the-counter products advertised only to the health professions — exceeded \$2 billion in the U.S. for the first time in 1963, according to the Bureau of the Census.

All drug industry sales were \$2.95 billion, five per cent above 1962, the bureau

said. It reported the ethical figure at \$2.05 billion, 5.4 per cent over the previous year.

The Pharmaceutical Manufacturers Association said the domestic sales figure reported by Census was about \$300 million less than its own figure of \$2.39 billion. PMA said the Census Bureau excluded about \$165 million worth of biologicals in its report.

Census and PMA employed several other varying means of interpreting sales and this accounts for the remaining difference in the two figures.

The report by the census bureau is its second in a new series on pharmaceutical industry sales. Census treated separately the sale of proprietary drugs but said the 1963 volume was \$803 million, up 4.9 per cent from the 1962 level of \$766 million.

PMA said census figures over the years show that sales of human ethical preparations increased by 83 per cent between 1954-63; a reduction in the 109 per cent increase reported for the period 1947-54.

According to the figures from the census bureau, "drugs acting on the central nervous system and sense organs" lead all others in sales volumes.

## News From Our Medical Schools

Dr. John R. Mitchell is the new chairman of the Department of Pediatrics at the Creighton University School of Medicine. He also holds the rank of associate professor.

A graduate of the State University of Iowa College of Medicine, Dr. Mitchell was civilian chief of pediatrics at Gorgas Hospital, Panama Canal Zone, and assistant professor of pediatrics at Tulane University before joining the Creighton faculty in 1954.

## Human Interest Tales

Doctor Ben O. Martin has moved to Pender after previously practicing in Crawford.

Doctor B. N. Greenberg, York, addressed



the Wymore Lions Club at an October meeting.

Doctor and Mrs. Robert J. Ellingson, Omaha, toured Europe on a vacation, in November.

Doctor Frank Tanner has been renamed to the State Board of Examiners in Medicine and Surgery.

Doctor Wm. Reardon has moved to St. Edward having practiced the past few months in Oakland.

Doctor C. A. McWhorter, Omaha, has been re-elected to the Board of Governors of the College of American Pathologists.

Doctor T. D. Fitzgerald, Alliance, was honored in a special presentation at a Veterans Day dinner held in November.

Doctor B. A. Owen, Hay Springs, was honored for his service to the community at a picnic held in his honor in October.

Doctor Maurice Pepper of Omaha has been named consultant for Nebraska for the City of Hope Medical Center in Los Angeles.

Doctor Warren H. Pearse, Omaha, has been elected Secretary-Treasurer of District 6 of the American College of Obstetricians and Gynecologists.

Dr. John A. Brown III of Lincoln was elected, recently, to the office of president-elect of the Nebraska State Obstetric and Gynecologic Society.

Doctor C. N. Sorensen, Scottsbluff, received the distinguished service award of the Twin Cities Cosmopolitan Club at a meeting held in November.

## Deaths

FINDLEY — Palmer Findley, MD, of Omaha, died November 8 at the age of 96. A graduate of the Northwestern University School of Medicine, he practiced in Omaha and was active at local, state and national levels. He received national recognition as an obstetrician-gynecologist and as a medical author.

FRAZIER — George Frazier, MD, who had been living in Tacoma, Washington, died in November. His funeral was held at Sante, Nebraska. He graduated from the Denver College of Physicians and Surgeons in 1903.

JENKINS — Dr. Harry J. Jenkins, a practitioner in Omaha since 1916 died in Omaha on October 20, 1964 at the age of 71. Dr. Jenkins was a graduate of the Creighton University School of Medicine and was a long time member of the faculty. He was a veteran of World War I and formerly was Secretary-Treasurer of the Omaha-Douglas County Medical Society.

MATHENY — Zellmond E. Matheny, MD, died on November 8, in Lincoln, at the age of 91. He graduated from Keokuk Medical College in 1894 and practiced medicine in Lincoln, Omaha, and Sioux City.

MORISON — Charles Campbell Morison, MD, a former Omahan, died November 16 at Oakland, California, at the age of 89. A 1903 graduate of the University of Nebraska College of Medicine where he later served as an Instructor in Surgery.

POWELL — Dr. M. J. Powell, who had practiced in Fairbury for more than 50 years, died October 7, 1964, at the age of 83. He was a graduate of the Ainsworth Medical College in St. Joseph, Missouri. Three times president of his County Society, Dr. Powell had also served as City Physician.

## Woman's Auxiliary

### President's Message—

May I take this opportunity to thank you for making it possible for me to serve as your president this year. My enthusiasm has been renewed by attending the Annual Fall Conference in Chicago, and I have become more acutely aware of the importance of the work we have before us. I am looking forward to working with each of you.

Mrs. William H. Evans, our national presi-

dent, has called on us to "stop being a woman's club and start being a working organization." Her choice of a theme for the year: Better Health — Better World, really challenges us to go to work. Our past accomplishments give us a broad basis for this work, and our present enthusiasms and talent will help us carry on the program.

We are urged to concentrate our efforts on the projects most needed in our own communities. For a small auxiliary, it is better to carry *one* needed project to a successful conclusion. There is a selection of projects which are needed and interesting to a particular locality.

This year we have been asked to double our membership. The *Bulletin*, the national publication, is being made available to each member, and it is to be our most important line of communication from National. Doctors' wives who are not members may be unaware of this information, and may often be uninformed on the over-all picture of auxiliary work.

Legislation continues to be of interest to each of us, and we must be well informed on the issues involved if we are to be effective in talking with others. AMA-ERF is a priority project with National. Funds are needed, are used, must be raised.

The greatest opportunity for building a better world through better health lies in our "Community Service" projects. As we work with others, don't "hide our light under a bushel." Let our identity shine through our work as we help others to help themselves.

Let us evaluate our program and see if we are living up to our privilege of serving in the capacity of doctors' wives. Every member counts — let's invite our neighboring doctors' wives and really spread our program over Nebraska.

Let me urge each of you to participate in the programs decided upon by your group. What the auxiliary accomplishes in the year ahead depends upon what you, the individual member, accomplishes. Making these objectives your personal goals for the year will turn these words into a reality — for

BETTER HEALTH and a BETTER WORLD.

Mrs. John A. Brown III,  
President,  
Nebr. State Medical Auxiliary

#### Lancaster County—

The Christmas meeting of the Lancaster County Medical Auxiliary was again highlighted by the spirit of giving as each member present brought a doll for the annual donation to the Family Service Association for holiday distribution. State president, Mrs. John A. Brown III, was honored guest and speaker at the sandwich luncheon held at the home of Mrs. Orvis A. Neeley. Co-chairmen were Mrs. Lee Stover and Mrs. I. E. Weston. Lovely Christmas music was presented by the Lincoln High School Girls' Octet.

A new feature this year for the annual fund-raising bridge benefit and bake sale proved highly successful. Members donated hand-made or unusual holiday items and antiques to be sold at a silent auction. Proceeds, donated to the AMA-ERF, Nebraska Medical Foundation and Floyd Rogers Camp, were about double those of the previous year. The November 12th event was held at the St. Elizabeth Hospital Nurses Home. Co-chairmen were Mrs. J. W. Ballew, Mrs. W. J. Jarvis and Mrs. E. D. Zeman reported 85 per cent of the membership contributed in some way to the project.

#### Dawson County—

Ten members of the auxiliary attended our November meeting at the home of Mrs. Ray Wycoff in Lexington. Mrs. J. V. Scholz presided in the absence of the president and vice-president.

Legislative chairman, Mrs. Sam Perry, reported on the recent state board meeting. Various methods were discussed for the legislative committee to function in the fight against upcoming legislation for medical care for the aged. It was fairly well agreed that at this point we must continue to put the truth before the public, encourage them to contact their congressmen, and

write letters ourselves. We are also hoping to publish helpful information on Kerr-Mills in Nebraska so that the aged who are eligible and needy may avail themselves of these funds.

Possible community service projects were discussed briefly, and a report was made on the loan system of the Nebraska Medical Foundation.

Our interesting and informative program for the evening was a tape-recording of the speech made recently at the Kearney State College by Herbert Philbrick. Mr. Philbrick will be remembered as the man who for nine years led a triple role of American citizen, Communist party member, and counter-spy for the F.B.I.

#### Omaha Auxiliary—

Mrs. J. F. Lucas has been re-elected to her fifth four-year term on the Omaha School Board, having been a member of the board since 1948 and its first woman president from 1953-1955. Mrs. Lucas was the first woman to be elected President of the Nebraska State School Boards Association, in which capacity she served from 1956-1957. For thirteen years she was a member of the Nebraska Congress of Parents and Teachers. In 1959 Mrs. Lucas was elected to the National School Boards Association and is currently on its Board of Directors.

The field of education, parent-teacher work and community service has been an extensive one for Mrs. Lucas. In 1954 she was the winner of Omaha's "Mother of the Year in Education" award and in 1957 she was given citation by Omaha for her work in city planning. She has countless other civic and cultural memberships, activities, and honors, for which her family and the medical auxiliary can be proud.

#### Adams County—

Officers of the auxiliary are: President, Mrs. Russell McIntire; Vice President, Mrs. Robert Mastin; and Secretary-Treasurer, Mrs. L. V. Weiler.

The September meeting was held jointly

with the doctors. Dr. C. M. Foote showed a film on the S. S. Hope, "Hope in Peru," based on his experiences with the S. S. Hope, a floating medical center on which he has served. Dr. Foote returned to the United States November 18th, after having served another month with the S. S. Hope, this time in Conakry, Republic of Guinea, West Africa.

On October 7th the auxiliary met with the doctors for dinner at Meadowbrook Country Club. Following their business meeting the women heard Miss Joan Jirsa, Professor of Modern Languages, Hastings College and Hastings Junior and Senior High Schools. Miss Jirsa presented a slide-illustrated talk on her five weeks in Russia.

On November 4th Mr. Robert Sass, florist, demonstrated floral arrangements with special attention to Christmas bouquets. The annual Christmas party was held December 2nd.

#### Scotts Bluff County—

Mrs. W. E. Holmes of Scottsbluff is the president of the auxiliary. The first meeting of the year was held September 15th at the Country Club. As is their usual custom the auxiliary members joined the doctors for dinner and then separated for their own meeting.

In October, the doctors and their wives were entertained at the Gra-Mar Manor Nursing Home for dinner. The program was given by Betty Karpf, a candidate for the state legislature from this district. She had a question and answer period which proved both instructive and entertaining, and showed that she was not in favor of government medicine.

The auxiliary members have been saving trading stamps of all varieties for some time to use in procuring "extra" items for the present nurses' home and to procure items of necessity and beauty for the new nurses' home, soon to be built in connection with the new West Nebraska General Hospital. The school of nursing has always been one of the auxiliary's main projects.





## Know Your Blue Shield Plan

### The Difference—

Blue Shield is different than any other form of prepaid health care. It functions only to provide a means of prepaying for health services at the lowest cost possible consistent with good administration, not to make a profit and declare dividends to any select group of people. It is voluntary, not compulsory, and it is free enterprise, not government.

Although Blue Shield has to operate on insurance principles for actuarial purposes, it is a health service operated in the public interest and not an insurance company.

Only in Blue Shield do the individual physician and medicine collectively have representation on the Board of Directors and through the various committees from both State and County Medical Societies that meet with the Board.

Blue Shield furnishes its Participating Physicians manuals and Request for Payment forms with the doctor's name and code number pre-printed. If properly used, this simplifies processing of cases for the doctor and his office staff, and saves considerable time and money. One very important caution — *be sure and use your own forms* — not someone else's — *because payment is made to the doctor whose code number is printed on the form.*

Blue Shield conducts Doctors' Assistants Workshops and has personnel that call on doctors' offices to inform and assist office personnel in processing cases.

Blue Shield members have the advantage of providing prepaid medical care for their families at a minimal overhead and maximum return value, paying dues based on economic factors of the period. When economy is up, they pay more, and when economy is down, they pay less.

Members do not have to fear cancellation of their coverages because of health, age, oc-

cupation or usage. They can keep their Blue Shield coverage indefinitely as long as they pay their dues on time, and neither they nor their employer cancel or replace Blue Shield with another carrier.

Blue Shield protects the Members' dollar and the Physicians' interest by having:

1. A Committee of physicians, hospital administrators, attorneys, and laymen established to review questionable cases and establish precedents for future guidance;
2. Each case submitted receives special examination by specially trained personnel — persons interested in good health care . . . not profits;
3. An electronic computer to pay each eligible claim . . . This not only assures the accuracy of each payment, but permits operation expense to remain at the minimum;
4. Each subscriber receive a copy of the check for any payment made and advised to call Blue Shield if he has any questions about the payment;
5. Cost control measures constantly studied to assure that the absolute minimum consistent with good administration is spent for operating expenses;
6. The dollar received become benefits, not profits. Except for the small operating costs, every dollar is used for payment of current or future claims; and,
7. Commissions, dividends, and so forth, are not paid. The dollar is stretched to the maximum with a membership in Blue Shield.

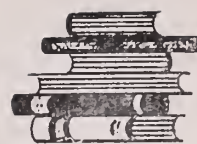


DOCTOR — Please take each copy of your Journal home. The wives complain that they never get to read the Auxiliary column.





# Books



**"Etiology of Diabetes Mellitus and Its Complications"** — a Ciba Foundation Symposium, edited by M. P. Cameron and M. O'Connor. Published in 1964 by Little, Brown and Company of Boston, Mass. 405 pages with 85 illustrations. \$12.50.

This volume, another outstanding symposium in the Ciba's Foundation's Colloquia on Endocrinology, emphasizes the pathogenesis of diabetes mellitus and its complications in humans.

Participating in the symposium were 13 international authorities, among them Dr. C. H. Best. The group met to rethink the whole problem of diabetes mellitus — to see where past investigation and current research have led, and where future avenues of inquiry might be directed to shed new light on this complex field. The following sampling of subjects from the table of contents indicates the scope of this volume:

1. Insulin biosynthesis and secretion
2. Insulin antagonism
3. Peripheral action of insulin
4. Microangiopathy in diabetes mellitus
5. The role of the pituitary in diabetes

The unusual breadth of this symposium will make it worthwhile reading for all physicians and researchers who deal with endocrine problems.

**"Lysosomes"** — a Ciba Foundation Symposium, edited by A. V. S. de Reuck, and M. P. Cameron. Published in 1964 by Little, Brown and Company of Boston. 446 pages with 79 illustrations. Price \$11.50.

This symposium was held in honor of Christian de Duve and his pioneering work on lysosomes. Twenty-five international authorities gathered to discuss the lysosome concept, the latest research in the field, and the areas still to be investigated. Among the topics discussed in detail were lysosomes in the physiology and pathology of cells, the occurrence and nature of esterases in lysosomes, the relation to lysosomes of the *in vivo* metachromatic granules, and action of vitamin A on the stability of lysosomes.

**"Disorders of Language"** — a Ciba Foundation Symposium, edited by A. V. S. de Reuck and M. O'Connor. Published in 1964 by Little, Brown and Company of Boston. 356 pages with 35 illustrations. Price \$11.00.

This symposium deals primarily with the aphasia due to focal lesions of the brain and the dilapidation of speech associated with diffuse organic changes in the cerebral hemispheres. At this meeting noted neurologists, psychologists and others concerned with the medical aspects of aphasia exchanged information with linguists and phoneticians to provide a multidisciplinary approach to language disorders. A few of the subjects discussed include:

1. Observations on cerebral dominance
2. Localization of symptoms in aphasia
3. Intelligence in aphasia
4. Non-verbal communication in aphasia
5. Application of the word-frequency concept to aphasia

Students of dysphasia will be particularly interested in the inclusion of a phonetic transcript of an interview with a dysphasic patient and the accompanying analysis. This book offers fresh and fascinating insights into language as a communicative system and as a pattern of behavior.

**"Animal Behavior and Drug Action"** — a Ciba Foundation Symposium, edited by H. Steinberg, A. V. S. de Reuck, and J. Knight. Published in 1964 by Little, Brown and Company of Boston. 491 pages with 103 illustrations. Price \$13.00.

This symposium was divided into two parts. The first part consisted of a meeting at which papers were read and briefly discussed. These papers were intended to survey the field with particular emphasis on the analysis of the way drugs act, both at the strictly behavioral level and in terms of neurophysiological and biochemical factors, and on the analysis of the interaction between drugs and the experimental circumstances which results in the behavioral effects observed. The part played by behavioral tests on animals in the screening of new drugs for clinical use in man was also examined.

The second part of the symposium consisted largely of unscripted discussion by a panel of 30 invited participants. Several of the topics opened up at the earlier sessions were explored in greater depth, in particular the problem of legitimate extrapolation from effects in animals to effects in man.

**"Brain — Thyroid Relationships"** by Ciba Foundation Study Group No. 18, edited by M. P. Cameron and M. O'Connor. Published in 1964 by Little, Brown and Company of Boston. 117 pages with 28 illustrations. \$1.95.

Twenty authorities from seven different countries present papers dealing with the following subjects:

- a. A summary of some recent research on brain — thyroid relationships
- b. Function of the hypothalamus in regulation of pituitary — thyroid activity
- c. Hypothalamic temperature and thyroid activity
- d. Effects of thyroid hormones on brain differentiation
- e. Longitudinal study of intelligence quotient in treated congenital hypothyroidism
- f. Psychological studies in hyperthyroidism

Following each paper, the group discusses the paper just read.



"Cellular Injury" — a Ciba Foundation Symposium, edited by A. V. S. de Reuck, and J. Knight. Published in 1964 by Little, Brown and Company of Boston. 403 pages with 81 illustrations. Price \$12.00.

Correlating with the symposium on lysosomes, this book begins with a discussion and review of the lysosome-concept in relation to cell damage. The ensuing discussion illuminates tested theories on injury by exogenous, endogenous and humoral agents, on the mechanisms of protection by drugs, on organogenesis and necrosis, and on the fine structure of damaged cells and the lesions produced by viruses.

"Diet and Bodily Constitution" by Ciba Foundation Study Group No. 17, edited by G. E. W. Wolstenholme and M. O'Connor. Published in 1964 by Little, Brown and Company of Boston. 120 pages with 31 illustrations. \$2.95.

Twenty-one authorities by eleven different countries present papers dealing with the following subjects:

- a. Early nutrition and later development
- b. Relationships of different bodily tissues during growth and in the adult
- c. Nutrition and stress
- d. Carbohydrates, the Cinderella of nutrition
- e. Psychological factors in the control of food intake
- f. Nutrition, disease and length of life

Following each paper, the group discusses the paper just read. Your review editor believes that this small book will be of interest to each physician who reads this journal.

"The Immunologically Competent Cell" by Ciba Foundation Study Group No. 16, edited by G. E. W. Wolstenholme and J. Knight. Published in 1964 by Little, Brown and Company of Boston. 110 pages with 18 illustrations. Price not given, but probably about \$2.50.

Twenty-two authorities from eight different countries present papers dealing with the following subjects:

- a. Definition of the immunologically competent cell — its nature and origin
- b. Functional recognition of immunologically competent cells by means of the fluorescent antibody technique
- c. The role of small lymphocytes in the rejection of homografts of skin
- d. Cytophilic antibody
- e. The role of the thymus in the origin of immunological competence
- f. Immunologically competent cells in the fowl

Following each paper, the group discusses the paper just read, and the book concludes with a general discussion of the basic subject.

—F. M. NEBE,  
Review Editor

## TUBERCULOSIS ABSTRACTS

### MANAGEMENT OF SPONTANEOUS PNEUMOTHORAX

Differences of opinion on the management of spontaneous pneumothorax led a group at the Mayo Clinic to review the cases treated there over a 12-year period. For first attacks surgery did not appear indicated, but was frequently advisable for recurrent episodes.

Because of lack of agreement concerning the proper treatment of spontaneous pneumothorax, it was decided to review the records of the cases with this condition diagnosed during the years 1945 through 1956 at the Mayo Clinic.

Excluded from the study were all cases caused by accidental trauma or by thoracic operations and those related to obvious intra-pulmonary disease such as lung abscess with perforation into the pleural space. Patients with a pneumothorax produced intentionally for diagnostic or therapeutic purposes also were excluded.

Data abstracted from each record included history of previous episodes of pneumothorax and of chronic pulmonary disease, the activity of the patient at the time of onset of the pneumothorax, and the symptoms of the attack which prompted the patient to seek medical care at the Clinic.

Roentgenograms of the thorax were reviewed to determine the degree of collapse of the affected lung, the presence of pulmonary disease, and the occurrence of pleural effusion. Data were also obtained regarding the treatment of the patient and the results of treatment.

Of 157 cases included in the investigation, 109 had come to the Clinic during their first episode of spontaneous pneumothorax; the remaining 48 had had two or more attacks. There were 32 women in the series and 125 men.

Of the 109 cases of initial attack, 58 were on the right side, 47 on the left, and 4 were bilateral. Of the 48 recurrences, 26 were on the right, 19 on the left, and 3 were bilateral. All of the attacks had occurred on the same side in 31 of the recurrent cases; on the contralateral side in 8; and on both sides in 9 but not simultaneously in all cases. Three of the 48 had had more than five previous episodes of pneumothorax.

### LITTLE CHRONIC RD

Association of spontaneous pneumothorax with chronic respiratory disease was not common in the patients, there being no history of such in 85 (78 per cent) of those with original attacks and 42 (87 per cent) of those with recurrent attacks. Asthma or chronic bronchitis and emphysema were the most prevalent chronic pulmonary diseases among the rest of the group. There was no evidence that collapse of the lung was precipitated by any particular exertion. The most common symptoms were dyspnea, pain in the chest, and cough. Some had no symptoms at all and the pneumothorax was discovered when a roentgenogram of the thorax was made for other reasons.

Since treatment was not initiated for all of the patients while they were under our care, the data on therapy do not include all patients. Some patients, however, had more than one form of treatment. Forty patients with initial attacks and



eight with recurrent attacks were treated by rest. In 43 the lung reexpanded satisfactorily but the other five required more vigorous treatment. Pneumothorax recurred in only 6 cases during an average follow up period of 7½ years.

#### AIR AND FLUID ASPIRATED

Fifty-four patients with initial attacks and 25 with recurrent attacks were treated by insertion of an intercostal cannula or catheter and prolonged aspiration of air and fluid from the pleural space. In 55 the lung reexpanded satisfactorily. Thirty-nine had no further troubles during an average follow up period of more than 5 years.

Surgical treatment by thoractomy was advised and performed for six of the 109 patients with an original pneumothorax. This treatment was chosen because of apparent pleural or pulmonary disease or because of the duration of the pneumothorax prior to consultation at the Clinic. The surgeon found that three of these patients had emphysematous blebs. One patient had only a pleural exudate and the other two had no demonstrable abnormality. The surgical procedure depended on the disease that was detected. The blebs were resected, the pleura decorticated or simply abraded and, in one case, a parietal pleurectomy was performed. All patients had good results, none having another pneumothorax during an average follow up of 5 years.

Good results were also obtained by surgical treatment of 40 patients whose pneumothoraces were recurrent. Subpleural blebs were detected in 26 of these. The surgical procedure varied from

simple abrasion of the pleura or application of talc to the pleura to cause adhesions to actual parietal pleurectomy, the last operation being carried out in 14 cases. Lung tissue was resected when this seemed advisable. A simple wedge resection was adequate in most cases but a lobectomy was needed in six and the entire lung was removed in two. None of those patients had a recurrence on the ipsilateral side during the follow-up period, which averaged 44 years. However, five had spontaneous pneumothorax on the contralateral side between 10 days and 5 years later.

Follow up revealed that 21 of the 157 patients had died. Fourteen of these deaths were unrelated to the pneumothorax. In seven there might have been a significant relationship.

#### COMMENT

Since this was not a controlled study the results of one group cannot be compared with those of the other to determine which is the better treatment for general use. However, the data can be used to evaluate, in a broad sense, the management of patients with spontaneous pneumothorax.

While the success of the simpler modes of therapy, particularly for patients with an initial pneumothorax, is a potent argument against the routine use of the more radical surgical treatment, simple rest or continuous aspiration of air from the pleural space is not adequate treatment for all patients.

—David T. Carr, MD; Arthur W. Silver, MD, and F. Henry Ellis, Jr., MD, Proceedings of the Staff Meetings of the Mayo Clinic, March 13, 1963.

## ORGANIZATIONS, NATIONAL

### American Academy of General Practice

Mr. Mac F. Cahal  
Volker at Brookside  
Kansas City 12, Missouri

### American Academy of Pediatrics

E. H. Christopherson, Secy.  
1801 Hinman Ave.  
Evanston, Illinois

### American College of Legal Medicine

Glenn W. Bricker, M.D., F.C.L.M., Secretary  
1003-06 Medical Tower  
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Craig W. Muckle, M.D.  
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### American College of Physicians

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### American College of Radiology

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Chicago 6, Illinois

### American College of Surgeons

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Chicago 11, Illinois

### American Diabetes Association

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New York 17, New York

### American Heart Association

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New York 10, New York

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### American Society of Internal Medicine

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San Francisco 18, California

### The American Society of Clinical Pathologists

Miss Eleanor F. Larson  
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### American Medical Association

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### Arthritis and Rheumatism Foundation

Floyd B. Odum, Chairman  
10 Columbus Circle  
New York 19, New York

### International College of Surgeons

John B. O'Donoghue, M.D.  
1516 North Lake Shore Drive  
Chicago 10, Illinois

### National Multiple Sclerosis Society

257 Park Avenue South, New York 10, N.Y.

## ORGANIZATIONS, STATE

**Alcoholics Anonymous**  
1345 N Street, Lincoln

**American Red Cross**  
W. J. Frenzel, State Representative  
2631 Garfield, Lincoln

**Cerebral Palsy Association of Nebraska**  
Mrs. Ben H. Cosdery  
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3648 Folsom Street, Lincoln, Nebraska

**Muscular Dystrophy Society**  
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**National Foundation, Inc.**  
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State House Station  
Post Office Box 4813  
Lincoln, Nebraska

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Arthritis and Rheumatism Foundation**  
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**Nebraska Association of Pathologists**  
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**Nebraska Blue Cross-Blue Shield**  
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American Academy of General Practice**  
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**Nebraska Chapter  
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Omaha, Nebraska 69131

**Nebraska Chapter  
American College of Surgeons**  
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**Nebraska Chapters  
National Cystic Fibrosis Research Foundation**  
Greater Omaha Chapter  
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1301 Offutt Boulevard  
Bellevue, Nebraska

Lancaster County Chapter  
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Lincoln, Nebraska

**Nebraska Dental Association**  
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Lincoln, Nebraska

**Nebraska Diabetes Association**  
J. William Hervert, M.D., President  
Mr. Tom Skillman, Secretary  
7611 Lawndale Drive, Omaha, Nebraska

**Nebraska Dietetic Association**  
Barbara Holvick, President  
26th and Dewey, Omaha

**Nebraska Division American Cancer Society**  
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Omaha, Nebraska

**Nebraska Eye, Ear, Nose & Throat Society**  
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Omaha, Nebraska

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514 South 40th Street, Omaha 5, Nebraska

**Nebraska Hospital Association**  
Stuart Mount, Executive Director  
1335 "H" Street, Lincoln, Nebraska

**Nebraska Pediatric Society**  
Otto G. Rath, Secretary  
3929 Harney, Omaha

**Nebraska Pharmaceutical Association**  
Miss Cora Mae Briggs, Executive Secretary  
1001 Anderson Building, Lincoln 8, Nebraska

**Nebraska Psychiatric Institute**  
602 South 44th Avenue, Omaha

**Nebraska Public Health Association**  
George R. Underwood, M.D., President  
935 "R" Street, Lincoln, Nebraska

**Nebraska Radiological Society**  
Jack Zasters, M.D., Secy.-Treas.  
816 Medical Arts Building  
Omaha, Nebraska

**Nebraska Rheumatism Association**  
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Creighton University School of Medicine  
302 North 14th Street, Omaha, Nebraska

**Nebraska Society for Crippled Children**  
S. Orson Perkins, Director  
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**Nebraska Society for Internal Medicine**  
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**Nebraska State Department of Health**  
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**Omaha Mid-West Clinical Society**  
1613 Medical Arts Building  
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**POISON CONTROL CENTER**  
Children's Memorial Hospital  
502 South 44th, Omaha, Nebraska

**University of Nebraska College of Medicine**  
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Omaha, Nebraska

(Please help us keep these addresses correct, by notifying the Editor of any changes).



## THE NEBRASKA STATE MEDICAL JOURNAL

### BREAST FEEDING

Until recently, the woman's breast seemed about to become a useless (?) appendage. It could have been amputated early in life and many of our cancers thus avoided; especially since the adoption of oversized "cups" by those not so bountifully endowed by nature.

The "worm seems to have turned." According to an editorial in *Texas State Journal of Medicine*, (60:883, Nov. 1964), by Dr. Fred M. Taylor, "The turning point came in 1956 when a group of young mothers, reclaiming one of the instinctive rights of motherhood — the right to feed a baby at the breast — and desiring to help other mothers master the knack of nursing, organized the La Leche League." La Leche means milk, and is taken from the Spanish title for the Madonna, which, when translated, means Our Lady of Happy Delivery and Plentiful Milk.

The League has become international and now contains more than 140 units. These units provide instruction to classes and personal counseling to any mother who desires to breast-feed her baby. Classes are held to which meetings not only mothers, but physicians, medical students, house officers, and student nurses are admitted.

Much has been said for and against breast-feeding. Many of the points of argument are mentioned by Dr. Taylor, but most of his text affirms his favorable opinion of nature's way of feeding the young. This opinion is well expressed in the following:

"In other ways human milk feedings affirm the everlasting wisdom of nature." And "... the aims and achievements of La Leche League merit the thoughtful consideration of professional persons concerned with the kind of practices that nurture the physical and mental maturity of children and adults."

### ALPHABET SOUP

During the past two days this writer tried to read two articles, one a quasi-

medical, the other a "Guest Editorial" in a lapidary journal. He acquired only a faint idea of what each of these articles was presenting. The reason was the use of terms represented only by a series of capital letters such as ABCD. In neither case was any one of the abbreviations defined.

In one, the lapidary article, about one and one-third pages of 8 point type, three such abbreviations were used 20 times. In the other, the quasimedical, there were seven pages of 10-point type. The abbreviations occurred about eight times per page, and there were several combinations of capital letters. Here, again, none of the "ABC's" was identified as to its reference and meaning.

We all have met this phenomenon in our newspapers at times. Sometimes it is so frequent that one throws down the paper without trying to figure them out — again the context gives him the meaning though his temper is bad and part of his time is wasted. Occasionally this shortcut to avoiding writer's cramp is tried in medical manuscripts, but, on the whole medical writers have not formed this bad habit.

If either of these authors had identified his abbreviation by name the first time he used it in his article and placed the "ABC" abbreviation in parentheses after the name, he could have used his "ABC's" or or "XYZ's" without confusing the reader — thus *Medical Technologist* (MT). This is a good thing for medical writers to remember.

### COMMITTEE ON PSYCHIATRY

#### Report to the Nebraska State Medical Association

Your Committee on Psychiatry of the Nebraska State Medical Association has completed plans to report to you periodically in this *Journal* those of its activities which may be of help in your treatment of mentally ill patients and information of interest to you in the field of psychiatry. This is the first of many reports.



The Committee also will furnish services of varying types to aid you in psychiatric treatment and in disposition of mentally ill patients.

It almost goes without saying that most psychiatry is practiced by the family physician in the patient's own community — which is as it should be. Every doctor has his difficult behavior-problem-patients and families — the alcoholic, the chronic malcontent, the one who may seem to “enjoy” ill-health, the perennial failure, the marital slug-fest, and so on. When you feel you're at the end of your rope (or, preferably, before) call any psychiatric colleague — those in the state service and those in private practice — for telephone consultation anytime. Often this will be enough to help you set things back on the right track and keep the patient at home carrying on his normal duties. Following is a list of the available facilities, public and private, and of psychiatrists in private practice and state service. Returning a patient to his home after a prolonged absence may prove to be a greater problem than the one which resulted in his being sent away in the first place.

Early treatment at home is what counts!

Plans are underway for each Councillor of the Nebraska State Medical Association to reactivate meetings of the “Councillor District Medical Society” in his bailiwick; members of this Committee will take part in such meetings in each of the Districts and offer practical aid in psychiatric treatment to the physicians attending these meetings. These meetings will bear some resemblance to the system of traveling “clinics” used in Kansas.

It is hoped such meetings will begin shortly after January 1, 1965.

Please write this Committee or your Councillor about any comments, suggestions, criticisms, or advice you want to give.

More later.

#### Nebraska Psychiatrists in Private Practice—

Charles Landgraf, MD .....Hastings  
John D. Baldwin, MD .....Lincoln

Robert K. Jones, MD .....Lincoln  
Janet Forbes Palmer, MD .....Lincoln  
Robert J. Stein, MD .....Lincoln  
Jack Wisman, MD .....North Platte  
John A. Aita, MD .....Omaha  
Frank H. Barta, MD .....Omaha  
John L. Blodig, MD .....Omaha  
James Dunlap, MD .....Omaha  
Chester H. Farrell, MD .....Omaha  
William F. Giles, MD .....Omaha  
Harry C. Henderson, MD .....Omaha  
R. D. Jones, MD .....Omaha  
J. Whitney Kelley, MD .....Omaha  
G. Kenneth Muehlig, MD .....Omaha  
Merle Sjogren, MD .....Omaha  
Philip H. Starr, MD .....Omaha  
Robert S. Wigton, MD .....Omaha  
George A. Young, Jr., MD .....Omaha  
Floyd O. Ring, MD .....Union

#### Communities With Psychiatrists Available for Out-patient Treatment—

Hastings — including private practitioner  
Lincoln — including private practitioner  
North Platte — State Clinic  
Omaha — including private practitioners  
Scottsbluff — State Clinic

#### Private Hospital Facilities—

Archbishop Bergan Hospital .....Omaha  
Beatrice Lutheran Home .....Beatrice  
Bishop Clarkson Hospital .....Omaha  
Bryan Memorial Hospital .....Lincoln  
Children's Hospital .....Omaha  
Douglas County Hospital  
and Annex .....Omaha  
Immanuel Hospital .....Omaha  
Lincoln General Hospital .....Lincoln  
Mary Lanning Memorial  
Hospital .....Hastings  
Memorial Hospital .....North Platte  
Methodist Hospital .....Omaha  
Richard Young Memorial Hospital.....Omaha  
St. Elizabeth's Hospital .....Lincoln  
St. Joseph's Mercy Hospital.....Omaha  
St. Mary's Hospital .....Scottsbluff

#### State Institutions—

Beatrice State Home .....Beatrice  
Central Nebraska Mental Hygiene  
Clinic.....Hastings (out-patient clinic)  
Creighton University Dispensaries..Omaha  
Hastings State Hospital .....Hastings  
Lincoln State Hospital .....Lincoln  
Mental Hygiene Clinic .....North Platte  
Mental Hygiene Clinic .....Scottsbluff  
Nebraska Psychiatric Institute .....Omaha  
Norfolk State Hospital .....Norfolk  
(in-patient and out-patient)  
Southeastern Nebraska Mental Hygiene  
Clinic .....Lincoln (out-patient clinic)  
University of Nebraska  
Dispensaries .....Omaha

#### Federal Institutions—

Veterans Administration  
Hospitals .....Lincoln and Omaha

#### Committee on Psychiatry—

Charles W. Landgraf, Jr., MD, Chair-  
man, Hastings  
Harry Henderson, MD, Omaha  
Charles Ingham, MD, Norfolk  
Robert Wigton, MD, Omaha  
Leslie Grace, MD, Blair  
John Baldwin, MD, Lincoln

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## News and Views

### A Device to Help the Blind Write in Straight Line—

A blind lawyer here has developed an aluminum writing board to help blind people, who formerly could see, write straight lines on paper in regular script.

M. H. Dean, who became blind about four years ago but who continues as a practicing attorney, said the device is being patented and is being marketed through organizations serving the blind. (American Foundation for the Blind).

Mr. Dean said that of approximately 385,000 blind people in the United States, about

80 per cent became blind after being exposed to writing.

Metal guides enclose an area approximately  $\frac{3}{4}$  inch high and the width of an ordinary sheet of paper. Stretched across the upper part of this enclosed area is a rubber band which serves as a guide for the writer's fingers, the elasticity permitting the fingers to go below the nominal line for letters such as "y" and "p."

The paper is advanced by a three-sided aluminum bar across the top of the writing board, each turn of the side knobs advancing the paper one line.

The board for a single sheet of paper sells for about \$6.50. A more elaborate version using a roll of paper sells for about \$20.00. Orders have come from as far away as Beirut, Lebanon, in response to a listing in the Braille monthly magazine of the American Foundation for the Blind.

Mr. Dean said Reynolds Aluminum Supply Company had worked with him in selecting the proper aluminum alloy and advising on manufacturing techniques.

### Does Mills Favor King-Anderson Bill?—

Most of us have heard, with considerable concern, that Rep. Wilbur Mills (D., Ark.), chairman of the House Ways and Means Committee, has now come out in favor of the King-Anderson or similar bill. Be that as it may, he still believes, according to the December issue of National Association of Blue Shield Plans *Newsletter*, that the addition of this tremendous and unpredictable cost to Social Security "... can have an extremely dangerous effect on the cash benefits portion of the entire Social Security system." He calls attention to the fact that France's Social Security system is near the breaking point, not due to retirement benefits, but to the cost of the health insurance system.

If Chairman Mills is now for the King-Anderson legislation, he must favor a direct tax, the income from which will be to pay for the health benefits. In that case, the people can know what they are paying for and how much it costs.

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## Comments From Your President

On January 9th, before the National Conference on Kerr-Mills, our President of the AMA, Dr. Donovan Ward, made a major statement of policy of the AMA. This has been given very excellent press, radio, and television coverage so there is no necessity in giving the details of the proposed plan. I feel that at long last the AMA has a positive and dynamic policy for the care of the aged which, if adopted, would give complete medical care for all over 65, consistent with free enterprise in the practice of medicine. Whereas, the King-Anderson legislation offers only limited hospital care for the aged. A bill is being drafted incorporating the principles of this plan and will undoubtedly be presented to both the House and the Senate in the very near future. While the forces for the King-Anderson legislation are well organized and perhaps the momentum which has been generated by them cannot be halted, tremendous effort by organized medicine and many of our friends who traditionally are opposed to socialization will be exerted to consider this new proposal. Granted that had this policy been developed a year or two ago, its chance of success would have been much greater. We still must not assume a defeatist attitude. Perhaps with tremendous effort our child can become a prodigy in a very short time. A special session of the House of Delegates of the AMA has been called for February 6 and 7, in Chicago. There is little doubt that out of this session will come a plan of promotion that will involve the active and tireless work of many thousands of people, especially doctors. We shall keep you informed by bulletins concerning the critical post-natal period of our infant and your part in the care and nourishment necessary.

At this same meeting in which Dr. Ward made the statement of AMA policy, the various state Kerr-Mills plans were discussed. We learned the faults in our own



state plan and these will be conveyed to our Legislators for their consideration. Probably no steps will be taken to correct these faults until the outcome of the new AMA plan and the King-Anderson bill is known. The fate of the Kerr-Mills to a great extent is dependent upon Federal legislation. Sufficient to say, the Nebraska Kerr-Mills could be made a fine workable plan taking care of our elderly population with nine minor changes.

Remember the Nebraska State Medical Association Mid-Winter Meeting of the House of Delegates in Kearney on February 27 and 28, 1965. It is my personal plea that each county society president makes certain that his county society has full representation by both delegates and alternates. This could well be the most important session ever held by the House of Delegates.

Richard Garlinghouse,  
President.



## SYMPOSIUM on

**Bowel Evacuation**

## FOREWORD

*This symposium was held in conjunction with the University of Nebraska College of Medicine continuing education course on "Function and Disorders of the Colon," October 1-3, 1964, Eppley Research Institute Auditorium, Omaha, Nebraska.*

A symposium on bowel evacuation was conceived because of the absence of a general discussion of the subject since the New York Academy of Science presentation in 1953.\* A literature review suggests by its meagerness a general lack of basic science and clinical investigative interest in bowel evacuation even though disturbances in large bowel elimination are of great concern to the general public, patients and clinicians alike. The purpose of today's meeting is to present the subject from its basic science aspect, physiology and pharmacology, and to discuss some of the more prevalent related clinical problems. Time will not permit a complete discourse, particularly as regards the many applied medical disciplines where bowel evacuation is of interest. A panel discussion will follow the formal presentations at which time questions from the audience will be welcome. Our subjects and speakers are:

## INTRODUCTION TO PROBLEMS OF BOWEL EVACUATION

Isidore Cohn, Jr., MD  
Professor and Chairman  
Department of Surgery  
School of Medicine  
Louisiana State University  
New Orleans, Louisiana

## PHYSIOLOGY OF BOWEL EVACUATION

Jack D. Welsh, MD  
Assistant Professor  
Department of Internal Medicine  
University of Oklahoma  
Oklahoma City, Oklahoma

## PHARMACOLOGY OF BOWEL EVACUANTS

Keith W. Sehnert, MD  
Instructor  
Department of Internal Medicine  
College of Medicine  
University of Nebraska  
Omaha, Nebraska

## RELATION BETWEEN INTRARECTAL PRESSURE AND THE URGE TO DEFECATE

Frederick F. Paustian, MD  
Associate Professor  
Department of Internal Medicine  
(Division of Gastroenterology)  
College of Medicine  
University of Nebraska  
Omaha, Nebraska

## BOWEL EVACUATION AND THE PEDIATRIC PATIENT

Harry C. Shirkey, MD  
Associate Professor  
Department of Pediatrics  
Medical College of Alabama  
Birmingham, Alabama

## OBSTETRICAL AND GYNECOLOGICAL PROBLEMS OF BOWEL CONTENT ELIMINATION

Warren H. Pearse, MD  
Chairman and Professor  
Department of Obstetrics and Gynecology  
College of Medicine  
University of Nebraska  
Omaha, Nebraska

## THE GERIATRIC AND BEDRIDDEN PATIENT AND THE LARGE BOWEL

Charles Magnuson, MD  
Associate  
Department of Internal Medicine  
College of Medicine  
University of Nebraska  
Omaha

## PREPARATION FOR PROCTOSCOPY

Clyde E. Culp, MD  
Section of Proctology  
Mayo Clinic  
Rochester, Minnesota

## PANEL DISCUSSION

J. B. Christensen, MD (Audience)  
Omaha, Nebraska  
J. Milton Margolin, MD (Audience)  
Omaha, Nebraska  
William R. Weyhrauch, MD (Audience)  
Lincoln, Nebraska  
Glen F. Lau, MD (Audience)  
Lincoln, Nebraska

—FREDERICK F. PAUSTIAN, MD

\*The Colon: Its Normal and Abnormal Physiology and Therapeutics. Ann New York Acad Sci 58:293-540, 1954.

# Bowel Evacuation

JACK D. WELSH, MD

The University of Oklahoma Medical Center  
Oklahoma City, Oklahoma

**T**O best comprehend abnormalities of the bowel evacuation and the action of the various pharmacologic agents used in aiding bowel evacuation, it is necessary to review the available information concerning normal bowel evacuation.<sup>1-3</sup>

The rate of passage of the chyme through the intestine is related to the type of food ingested, amount of residua and the dryness or wetness of the material. Five to six hours after the ingestion of a meal, the greater part of the chyme has reached the cecum. An additional twelve hours is required for a portion of it to pass from the cecum into the sigmoid and descending colon. Normally, the fecal mass does not pass beyond the sigmoid into the rectum until the act of defecation is about to occur. The sigmoid serves as the reservoir for fecal matter, and this material steadily accumulates from the pelvic flexure upwards. The entrance of the fecal mass into the rectum is brought about by a mass peristaltic movement or gastrocolic reflex which is usually initiated by the ingestion of food at breakfast time. This gastrocolic reflex occurs within one to ten minutes after eating a meal and is manifested by cycles of increased activity as shown by: a heightened motility, hyperemia, and mucous secretion. The smooth musculature at the rectosigmoid may relax with the arrival of these peristaltic waves, allowing the lumen of the rectosigmoid to widen and feces to enter the rectum. The gastrocolic reflex survives bilateral vagotomy, thoracolumbar sympathectomy and destruction of continuity of intrinsic plexuses of the small intestine with those of the colon.

The rectum is insensitive to tactile and chemical stimulation, but the distention of the rectum (muscle sense) by the fecal mass initiates the desire to defecate. Other factors less well understood must also be involved, since fullness of the rectum is not

always an essential part of urgency, as shown by patients with diarrhea. The tension in the wall of the rectum, rather than the volume of its contents is the necessary stimulus for the defecation reflex. It is assumed that the receptors for this reflex are in series with smooth-muscle fibers. Distention of the rectum by a small amount of fecal material results only in a passive increase in the tension in the wall. Greater distention is followed by passive and reflex contraction, which further raises the tension and the pressure thereby augmenting defecation movements. There is a reciprocal relationship between the internal anal sphincter and rectum, since the anal sphincter relaxes whenever tension occurs in the rectal wall. This reciprocal reflex contraction of the rectum and relaxation of the internal anal sphincter is mediated by intrinsic plexuses. The colon is autonomous in that its motor functions can be affected without the help of extrinsic nerves. Arousal of the micturition reflex by a full bladder or the tactile stimuli of the skin and anus with passage of feces also facilitates defecation.

Voluntary facilitation or inhibition of defecation may occur. This fact shows that the nervous activity of the highest centers projects on the medullary and sacral centers and influences defecation. Voluntary inhibition of defecation is brought about by contraction of the muscles of the pelvic diaphragm and the external anal sphincter and is accompanied by depression of the motility of the whole colon. When voluntary closure of the external sphincter is effective, there is subsequent relaxation of the rectum, which, by reducing the tension in its wall, removes the stimulus for defecation. Consequently, the rectum may be filled with feces which fail to stimulate defecation until a subsequent mass movement increases the

pressure in the rectum and the tension in its wall. The defecation reflex is also inhibited by pain, or fear of pain, particularly the pain aroused by defecation itself.

When the desire to defecate is not inhibited by centers above the sacral cord, the act itself may be voluntarily assisted by descent by the diaphragm, closing of the glottis and contraction of the chest muscles on the full lungs producing increased intra-abdominal and intrathoracic pressure. The intra-abdominal pressure is also increased by contraction of the abdominal muscles. The levator ani muscle assists by offering resistance to the pressure of the muscles of the diaphragm and the abdominal wall. The flexion of the spine with the pressure of the thighs flexed on the abdomen further increases intra-abdominal pressure; which may be raised from 25 to 200 mm of mercury by the straining act during defecation. The increase in the intra-abdominal pressure produces further distention of the rectum by causing the passage of more fecal matter into the rectum. This further distention of the rectum initiates impulses to centers in the sacral cord where efferent impulses arise and cause peristaltic action over the descending and sigmoid colon, shortening of the rectum, contraction of the voluntary muscles of the abdominal cavity and relaxation of both anal sphincters. Under normal conditions, this process is aided by the voluntary contraction of the diaphragm and muscles of the abdominal wall, and by the relaxation of the

external anal sphincter. The tonic contraction of the levator ani muscles directs the fecal mass in a forward direction toward the anal canal. The final expulsion of the excreta is assisted by the action of the levator ani muscles; their contraction actually pulls the anal canal over the fecal mass and resists prolapse of the anus and rectum.

In summary, bowel evacuation may be divided into three phases: (1) The intestinal content is transported to the sigmoid where it accumulates. (2) A mass peristaltic wave, which usually occurs after eating a meal, moves the fecal material into the rectum. Distention of the rectum increases the tension in its wall and initiates the desire to defecate. Voluntary inhibition of defecation may occur with subsequent relaxation of the rectum which by reducing the tension in its wall removes the stimulus for defecation. (3) If the defecation reflex is not inhibited, defecation occurs through the action of various muscle groups which increase intrathoracic and intra-abdominal pressure, produce peristaltic action of the left side of the colon and relaxation of the anal sphincters.

#### References

1. Davenport, H. W.: *Physiology of the Digestive Tract*. Year Book Medical Publishers Incorporated, Chicago, 1961.
2. Magee, D. F.: *Gastro-intestinal Physiology*. Charles C Thomas, Springfield, Illinois, 1962.
3. Bockus, H. L.: *Gastroenterology*, Volume II, Second Edition, W. B. Saunders Company, Philadelphia, 1964.

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Modern medicine has made it possible for most people with epilepsy to lead normal, productive lives. Yet, they live in constant fear of losing their jobs — and their friends — because of superstition. The Epilepsy Foundation is now conducting Epilepsy Information Month. For more facts on epilepsy, write to The Epilepsy Foundation, Washington, D.C. 20005.



# Pharmacology

of

## Bowel Evacuants

and

## Laxatives

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University of Nebraska College of Medicine  
Omaha, Nebraska

### Introduction

I shall present to you this morning a brief discussion of the pharmacology of evacuants and laxatives. I am limiting my comments to those agents most frequently recommended or prescribed by physicians.

A recent survey of retail drug store and hospital pharmacies\* showed that they bought \$34.8 million (wholesale) worth of bowel evacuants and laxatives in one year. This represents a respectable portion of the drug dollar spent in America.

A similar survey† showed that some type of bowel evacuant or laxative was prescribed in a total of nearly 5 million office visits by patients in one year.

These figures demonstrate a fact well known to all physicians: many Americans are preoccupied with their bowel habits. It also suggests that more and more bowel evacuants are being used routinely for medical or surgical procedures.

### Classification

In the often bewildering array of products, a physician may lose sight of the fact that there are basically six categories of laxatives and evacuants: *irritants*, *bulk producers*, *saline cathartics*, *emollients*, *enemas*, and *suppositories* (figure 1).

### Mode and Site of Action

a. *Irritants* — Irritant or stimulant laxatives act by increasing propulsive motility

of the gut. Most of these agents have both local and systemic effects. Although seldom used today, the classic type in this category, emodin, illustrates the action well. It causes catharsis even when injected intravenously. The effect is thought to depend upon excretion of the drug into the colon.<sup>1</sup> Most cathartics generally included in this category also owe part of their activity to local mechanical irritation which is usually mild. Mucosal congestion and rectal irritation,<sup>2</sup> as well as increased secretion of mucus<sup>2,3</sup> are reported.

Figure 1

### CLASSIFICATION OF EVACUANTS AND LAXATIVES

- a. Irritants
  1. Anthracene or emodin-like drugs
    - a. Cascara sagrada, U.S.P.
    - b. Senna, N.F.
    - c. Rhubarb, N.F.
    - d. Bisacodyl
  2. Phenolphthalein
  3. Castor oil (ricinoleic acid)
- b. Bulk Producers
  1. Agar, U.S.P.
  2. Psyllium seed, N.F.
  3. Synthetic derivatives of cellulose (methylcellulose, U.S.P.)
  4. Synthetic derivatives of sodium carboxymethyl cellulose, U.S.P.
- c. Emollients
  - Mineral oil (liquid petrolatum)
- d. Saline Cathartics
  1. Magnesium hydroxide (milk of magnesia)
  2. Magnesium sulfate
  3. Magnesium citrate solution
  4. Sodium phosphate
- e. Enemas
  1. Saline
  2. Olive or cottonseed oil
  3. Soap suds
  4. Tap water
- f. Suppositories
  1. Effervescent or carbon dioxide type
  2. Irritant types (bisacodyl, senna)
  3. Glycerin

\*Confidential Drug Store Panel Report

†National Disease and Therapeutic Index Reference File 1:199, July, 1963/June, 1964.

b. *Bulk Producers*—The various bulk producers exert their laxative action primarily through colloidal swelling. Each has a hydrophilic or “water-holding” capacity. Basic studies show that the total bulk of the stools as well as moisture content is increased.

When bulk producers are administered along with water and other fluids, a mechanical stimulus is provided for the hypotonic bowel. Stretch receptors in the wall of the small bowel and colon respond to the bulk in the lumen of the gut.

c. *Emollients* — An emollient is an agent which softens, smooths or lubricates a surface. An emollient laxative thus lubricates the stool for easy passage through the small and large colon. Modell<sup>4</sup> states that the only material of importance is mineral oil; that it may be “light” or “heavy;” and that even cheap grades, if of U.S.P. standard, are fully satisfactory. Flavored and emulsified preparations add to the palatability of these laxatives.

d. *Saline Cathartics* — Relatively insoluble salts of magnesium, such as the sulfate, phosphate, or citrate, are poorly and only slowly absorbed from the gastrointestinal tract. When these salts are taken orally, they remain in the lumen of the gut for considerable periods of time. The semipermeable membrane of the gastrointestinal mucosa allows fluid to pass from the circulatory system into the intestinal tract, increasing the volume of bowel content until the solution of the cathartic salt is rendered isotonic with the body fluids.

The pharmacologic action of the cathartic depends upon the initiation of the defecation reflex by mechanical pressure in the rectal wall from an accumulation of osmotically retained fluid. The rectal mucosa absorbs or secretes fluid, depending upon the osmotic gradient between the rectal wall and the contents of the lumen. A 4 per cent solution of hydrated magnesium sulfate is isotonic with the body fluids;<sup>5</sup> thus, if a hypertonic solution of the salt is present in the lumen of the lower colon, there may be an enormous outpouring of fluid that distends the colon. An irritant action is also present which not only augments motility but

results in a profuse mucous secretion from the rectal ampulla up to the hepatic flexure of the colon.

e. *Enemas* — An enema may exert a bowel-evacuating effect in one of several ways. A saline enema will add “bulk” to the rectosigmoid colon as well as the same osmotic diffusion factors discussed in the saline cathartics. Olive oil or cottonseed oil provides lubrication while soapsuds add an irritant quality to the enema. These pharmacologic agents stimulate the intestinal musculature and initiate the defecation reflex.

f. *Suppositories* — The action of glycerin<sup>6</sup> as well as that of senna and bisacodyl suppositories is related to an irritant action that promotes evacuation of the bowel.

The effervescent or carbon dioxide liberating type of suppository has a different mode of action. Blumberg<sup>7</sup> and Barowski<sup>8</sup> report that when such a suppository is moistened and inserted into the rectum, carbon dioxide gas is liberated. Enough gas is released to cause rectal distention and stimulate defecation. On the average, the amount of carbon dioxide gas released is 230 cc.<sup>8</sup> The effervescent suppository now available‡ combines in a water-soluble base of polyethylene glycols a number of salts, such as sodium bicarbonate, sodium acid pyrophosphate, and sodium biphosphate anhydrous. The release of carbon dioxide initiated by contact of this suppository with moisture in the rectum caused defecation within 30 minutes in nearly all cases studied. Best and Taylor<sup>9</sup> state that the “desire to defecate is experienced whenever the pressure within the rectum is increased” and that “an increase in the volume of the contents of the rectum of from 15 cc to 25 cc has been shown to be sufficient to produce an urge.”

#### Limitations and Undesired Side Effects

Nearly every medication that I have presented today had some type of limitation or undesired side effect. Some of the common limitations of irritants, saline cathartics, bulk producers, and emollients have

‡Vacuette®, a product of Dorsey Laboratories, Lincoln, Nebr.

been reviewed as follows by Lynch and Shirkey.<sup>10</sup>

a. *Irritants*

1. The anthracene-containing drugs such as cascara sagrada (U.S.P.), senna (N.F.), and rhubarb (N.F.) may discolor the urine.
2. Phenolphthalein may occasionally cause toxic skin reactions.
3. Uncomfortable "griping" may occur.

b. *Saline cathartics*

1. Magnesium sulfate is contraindicated in anuria or decreased urine flow because small amounts of magnesium ion are absorbed from the gut and enter the circulation.
2. Some saline cathartics draw water into the gastrointestinal tract producing a watery stool that sometimes dehydrates the patient.

c. *Bulk producers*

These have a limitation in pediatric therapy because they are poorly accepted by children.

d. *Emollients*

1. Oil in the form of an emollient laxative may cause lipoid pneumonia, especially with repeated oral use.
2. Oil can cause nutritional problems if it absorbs carotene and vitamins A and D in their natural oil-soluble state so that these vitamins will be passed with the stool.

e. *Enemas*

The limitations and unpleasant side effects of the enema have been described. Some things have been said that are *not* suitable for a high level symposium such as this. One patient, Mrs. Rose Sultan,\*\* however, was moved to use poetry and language that I *can* present here.

"Back to my room I went  
once more.

Out came the enema bag  
I had to make sure, I was  
clean and pure,  
I felt like an old dish rag!

"Then I had the Colon X ray,  
Some Barium was inserted,  
'Have pity on my tender spot!'  
In the dark, I almost blurted.

"So while I 'stand' and shed  
these tears,  
Into my glass of beer,  
I want to give some good advice  
Before you come out here.

"To all you folks from Brooklyn,  
From California and the Hague,  
Just stop and reconsider  
For enemas are a plague!"

In addition to some of the well-known limitations of the enema, such as inconvenience and patient aversion, a recent report<sup>11</sup> indicates that disease can be transmitted by the enema can.

f. *Suppositories*

The limitations and side effects of the suppositories most commonly used today have been reported in the literature. Smith and Schwartz<sup>12</sup> reported that bisacodyl produced smarting, burning, or tenesmus in 33 antepartum, 12 postpartum, and 4 preoperative patients of 661 obstetric and gynecologic patients.

Barowsky<sup>8</sup> reported finding slight mucosal erythema four times in 75 studies in 25 patients, each of whom used the new effervescent suppository, a glycerin suppository, and a control suppository. Erythema was found two times when the glycerin suppository was used and not at all when the control suppository was used.

Blumberg<sup>7</sup> found griping present in six of 489 trials with the same effervescent suppository and in three of 167 trials with a glycerin suppository.

\*\*Sultan, June Rose: My "Tail" of Woe, L. S., Inc., Rochester, Minn., 1951.



The frequency of use of effervescent and laxative prescriptions, according to the survey to which I made reference in the introductory comments of this paper, are graphically presented in figure 2. I have reviewed the limitations and common undesired side effects of some representative products in each category and have prepared a graphic tabulation of the data (table one). The ratings of intensity of action and tolerance by patients are admittedly arbitrary. A response rated as good by one doctor or patient may be reported by another as poor when any one product is evaluated. Similarly, even criteria such as mucosal irritation, cramping or griping, and abnormal stools vary a great deal.

Doctors want "a coat of many colors" for results when a bowel evacuant is used:

The radiologist wants a colon that is not only evacuated and clean but also one that is flaccid.

The proctologist wants to look at the mucosa of the colon; he does not want any mucosal erythema or excess secretions.

The obstetrician does not care if he produces erythema as long as the cleansing is prompt.

The internist is interested in a product with few unpleasant side effects so that the utmost in patient cooperation is possible.

The geriatrist prefers an effective product with a wide range of safety.

Now you can make your choice.

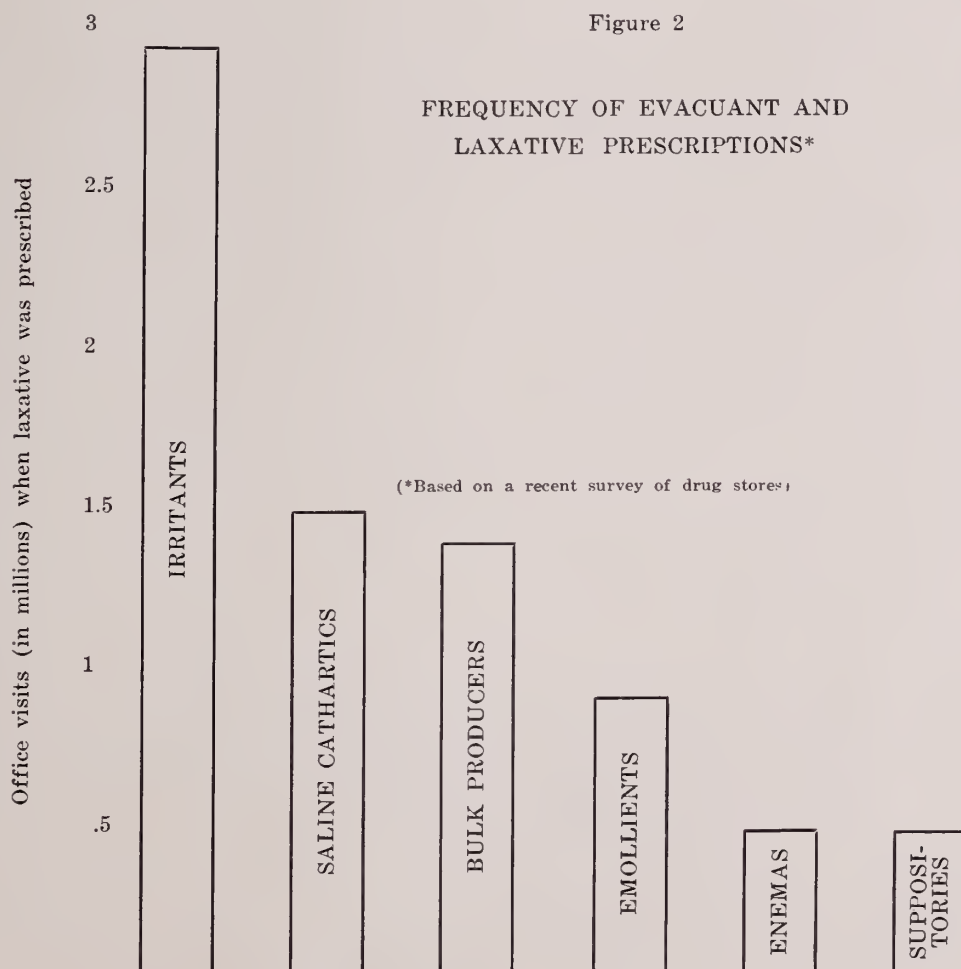


Table One

LIMITATIONS AND UNDESIRE SIDE EFFECTS  
OF REPRESENTATIVE EVACUANTS AND LAXATIVES\*

|                  | Intensity of Action      |                                     |                                     | Tolerance by Patients    |      |                                     | Mucosal Irritation       |                                     | Cramping                 |                                     | Stool Consistency        |                                     |
|------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
|                  | Good                     | Fair                                | Poor                                | Good                     | Fair | Poor                                | No                       | Yes                                 | None                     | Frequent                            | Normal                   | Liquid                              |
| Irritant         | <input type="checkbox"/> |                                     |                                     | <input type="checkbox"/> |      |                                     |                          | <input checked="" type="checkbox"/> |                          | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                                     |
| Saline cathartic | <input type="checkbox"/> |                                     |                                     |                          |      | <input checked="" type="checkbox"/> |                          | <input checked="" type="checkbox"/> |                          | <input checked="" type="checkbox"/> |                          | <input checked="" type="checkbox"/> |
| Bulk producer    |                          |                                     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      |                                     | <input type="checkbox"/> |                                     | <input type="checkbox"/> |                                     | <input type="checkbox"/> |                                     |
| Emollient        |                          | <input checked="" type="checkbox"/> |                                     |                          |      | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                                     | <input type="checkbox"/> |                                     | <input type="checkbox"/> |                                     |
| Enema            | <input type="checkbox"/> |                                     |                                     |                          |      | <input checked="" type="checkbox"/> |                          | <input checked="" type="checkbox"/> |                          | <input checked="" type="checkbox"/> |                          | <input checked="" type="checkbox"/> |
| Suppository      | <input type="checkbox"/> |                                     |                                     | <input type="checkbox"/> |      |                                     | <input type="checkbox"/> |                                     | <input type="checkbox"/> |                                     | <input type="checkbox"/> |                                     |

\*Irritant, bisacodyl; saline cathartic, milk of magnesia; bulk producer, psyllium seed type; emollient, mineral oil; enema, saline type; suppository, effervescent type.

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Many famous people have been victims of epilepsy — Van Gogh, de Maupassant, Leonardo da Vinci, Napoleon, Alfred Nobel, Saint Paul, Pascal, Handel and others. To dispel the superstition that surrounds epilepsy, The Epilepsy Foundation is sponsoring Epilepsy Information Month. Further facts are available by writing to The Epilepsy Foundation, Washington, D.C. 20005.

# INTRARECTAL PRESSURE

and the

## Urge To Defecate

**T**HERE is very little published information regarding pressure-motility studies of the colon, especially the rectum, whereas there is a considerable amount of literature on similar studies of the esophagus, cardio-esophageal junction and, to a lesser extent, stomach and small intestine. This well may be due to a reluctance on the part of both investigators and subjects to work in this area.

In the past, pressure recordings obtained from the rectum were limited to those derived from inflated balloons and open tip fluid-filled catheters placed in the cleansed rectum and rectosigmoid colon. The accuracy of the former method in demonstrating true resting activity is open to question inasmuch as the inflated balloon recorded more frequent pressure activity of greater magnitude than did the catheters, and evacuation pressures stimulated by progressively filling the balloons were not necessarily physiological due to the foreign body effect of the balloon mass.<sup>1</sup> The open tip catheters were not suitable for recording evacuation pressures because they did not give rise to a stimulus and to wait for fecal induced evacuation pressures required an exorbitant amount of time since such activity usually occurs only one to two times per day. The employment of cathartic induced evacuations was and is quite undesirable for obvious reasons.

During the utilization of a suppository which generates carbon dioxide through the interaction of sodium bicarbonate with sodium acid phosphate and sodium acid pyrophosphate liberated from a polyethylene glycol medium,\* it occurred that this agent might be utilized to induce defecation pressures of a more physiologic nature which could be recorded through indwelling rectal fluid filled open tip catheters. Through cor-

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relation of the gas-induced bowel-evacuation pressures with subjective sensations, information might be obtained as to the type and mechanism of action of the rectal sensors which initiate the defecation reflex. By adding a small perfusion tube to the pressure transmitting group, study of the differences in defecation urges as induced by the three media — gas, fluid, and solid — might also be accomplished. As of this date only a very preliminary report can be given on the gas- and liquid-induced urges for problems persist in the use of rapidly polymerizing agents for study of contractions induced by a solid medium.

Historically, the therapeutic instillation of gas into the rectum is not new for Hippocrates recommended inflating the intestines with a bellows in cases of volvulus or intussusception, and, in 1875, Dr. Bernardino Terres recommended separate enema injections of sodium bicarbonate and tartaric acid the interaction of which liberated carbon dioxide.<sup>2</sup>

### Method

The study subjects were selected from medical students and patients of the University of Nebraska Hospital who had no history of an abnormal bowel habit.

A group of three PE-190 catheters, two radiopaque, was introduced into the previously cleansed rectum via a 15 cm proctoscope such that the most proximal tube, relative to the anus, was 10 cm and the distal tube five cm above the muco-cutaneous junction with the nonradiopaque tube located between the two recording tube tips. The saline-filled pressure-transmitting catheters were attached to P23 DB Statham Trans-

\*Vacuette®, a product of Dorsey Laboratories, Lincoln, Nebr.



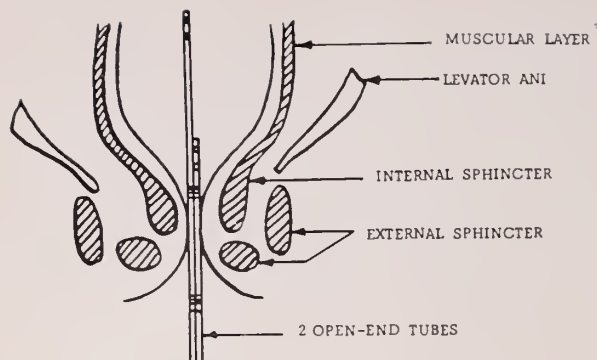


DIAGRAM - SHOWING POSITION OF THE TUBE IN THE RECTUM AND ANAL CANAL

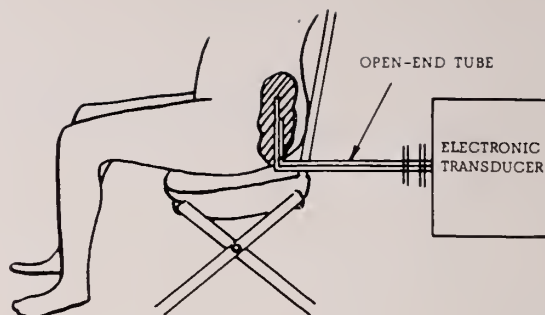


DIAGRAM - SHOWING POSITION OF THE PATIENT

Figure 1. Diagrams indicating intrarectal position of pressure-transmitting tubes and patient-position in relation to transducers.

ducers connected to pressure amplifiers in an Electronics for Medicine DR-8 for photographic recording (figure 1). A simultaneous pneumotachograph recording permitted differentiation of respiratory-induced pressures.

During the recording period the patients were seated on a Will-Mark commode. Following stabilization of the pressure waves to an apparent resting state on the monitor, an effervescent or inert suppository selected at

random was given to the patient, under double-blind conditions, for insertion into the rectum with instructions to indicate the occurrence of any subjective sensations. If, after 30 minutes, there was no subjective response, body temperature saline was infused into the rectum at 10 cc/minute via the third tube until defecation urge was induced.

The records were studied as to magnitude and duration of the pressure waves which

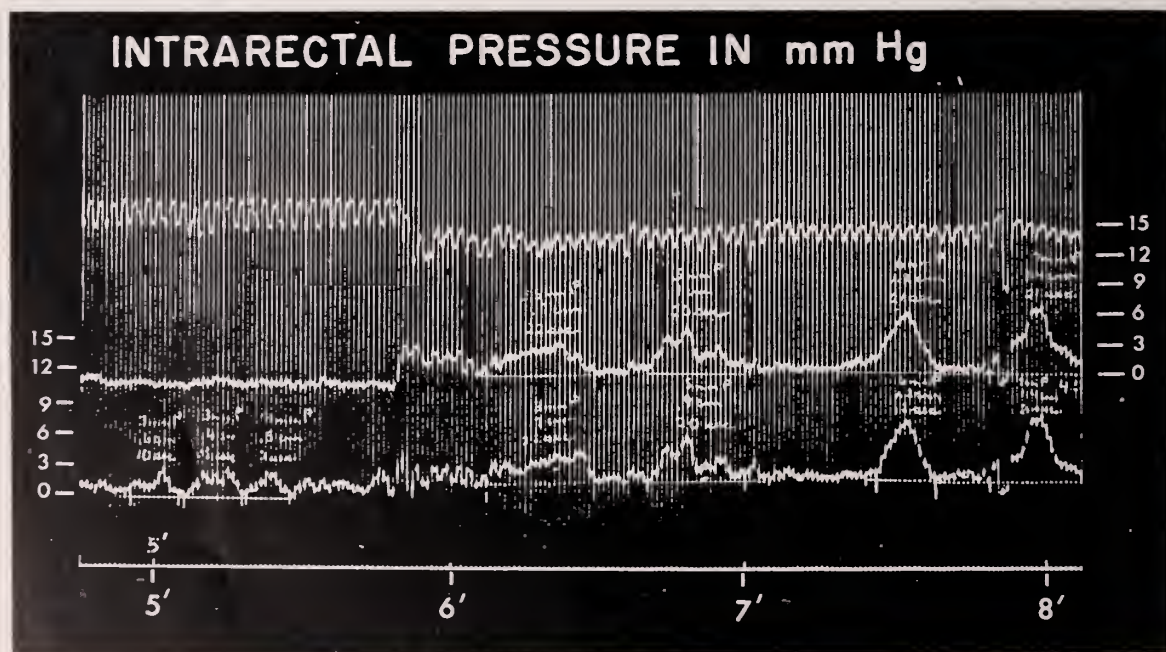


Figure 2. Postactive suppository insertion. Recording lines (same for all subsequent figures): Top—pneumotachograph; middle—proximal pressure-tube; bottom—distal pressure-tube; base—minute-time from suppository insertion and subjective sensation marker. Recording from distal tube on left shows phasic, low pressure waves and both proximal and distal tubes demonstrate irregular moderate pressure waves on the right, all without subjective sensation.

were then classified into types, analyzed as to frequency and correlated with subjective sensations. Following breaking of the double blind code, the above data was separated into active and inert suppository-groups. Similar pressure-wave analyses were performed on the saline perfusion records.

## Results

**Active Suppository — Ten Subjects —** Following insertion of the suppository the pressure returned to baseline within 30 to 40 seconds and remained so for variable lengths of time ranging from 1.30 to 12.16 minutes for both groups. Figure 2 shows two different types of urgeless activity commonly recorded in the rectum: (1) Low pressure phasic activity of average six cycles/minute with a duration of nine to twelve seconds and two to six mm Hg pressure; (2) irregular to regularly occurring moderate pressure of 2.2 cycles/minute with duration of 10 to 30 seconds and pressure of 5 to 12 mm Hg. Both pressure types together were present 10 to 15 per cent of recorded time and were non-propulsive.

Figure 3 demonstrates an interesting phenomenon, also recorded by other workers, of complete cessation of all activity, as if in a

preparatory state, prior to the defecation urge.<sup>3,4</sup> Of the 10 subjects receiving the active suppository, 70 per cent derived an initial urge varying in time after suppository insertion from 3.12 to 24.13 with a mean of 8.00 minutes. The duration of the pressure wave associated with the urge ranged from 10 to 45 seconds, mean 17 seconds, with a pressure of 4 to 8 mm Hg, mean 12 mm Hg. The initial urge was generally followed by a mixture of the urgeless activity previously described. For each active suppository there were 3.3 urges for the 30 minutes of observation.

An age correlation was noted between not only the number of urges per active suppository but also as to whether any urge occurred at all. The three subjects who did not develop an urge were above the age of 65 whereas of the seven who did, five were below the age of 50, one was 60 and one was 75. Figure 4 obtained from a 19-year-old male shows urgeless activity commencing at 5.35 with a striking urge and pressure wave at 6.39 minutes. Over the subsequent six minutes he sustained four additional defecation urges, each of increasing magnitude until gas and tubes were expelled. Just prior to defecation, a 40 mm Hg pressure

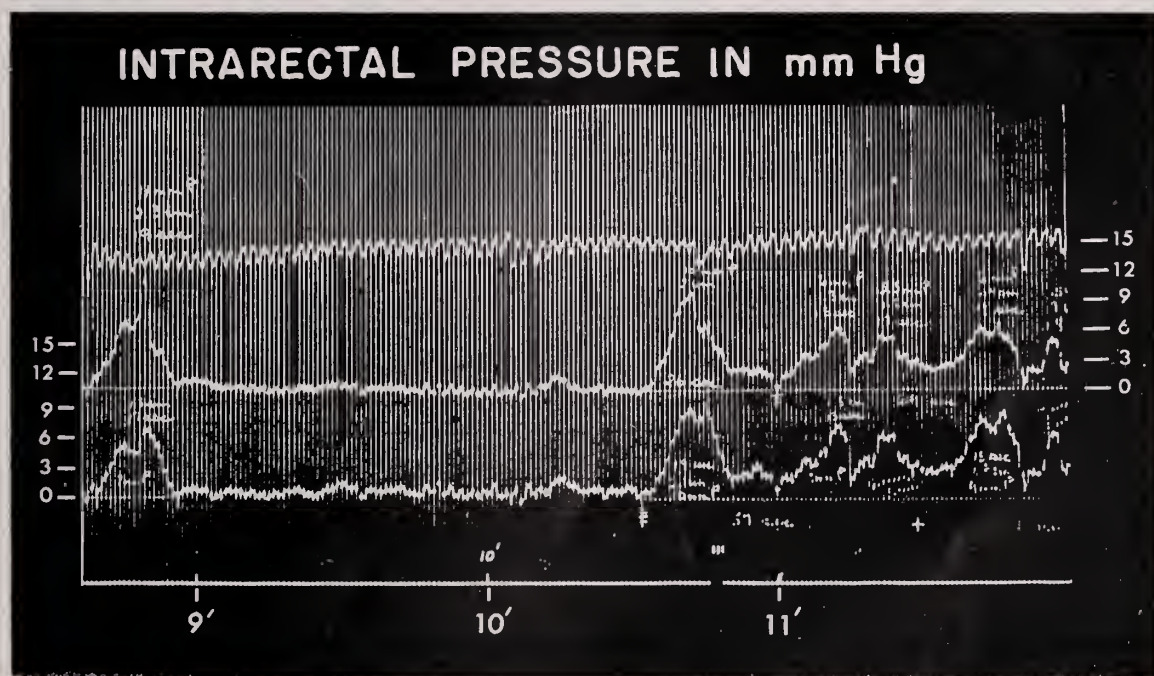


Figure 3. Active suppository. Male, age 75. Defecation urge-associated-pressure wave indicated by base line marker. Note cessation of all activity prior to urge and urgeless activity following subjective sensation.



wave was recorded only in the distal tube. In addition to the urgeless high pressure waves of six to 18 mm Hg there was a basic sustained low pressure of three to five mm Hg which persisted for eight minutes in the proximal tube.

**Placebo Suppository — Five Subjects —** Two cases, 40 per cent, developed a defecation urge, 9.13 and 17.32 minutes after receiving the inert suppository. The associated pressure waves were three and five tenths and 14.5 mm Hg respectively. The number of urges per suppository averaged three. A cessation of contraction preceded the urges. There was no difference in the low pressure phasic and irregularly occurring moderate pressure waves in this group from the active suppository group of subjects.

**Saline Infusion — Eight Subjects —** The volume of fluid necessary to induce an urge ranged from 25 ml to 125 ml, a mean of 61 ml. There was no distinctive relationship

between the volume necessary to induce an urge and age.

Prior to the defecation urge, as in figure 5, there was again a cessation of all pressure waves. There was no gradual increment of pressure except in one case, figure 6. The pressures associated with the saline induced urges ranged from 2.5 to 13 mm Hg with an average of 7.8 mm Hg. The duration of the pressure waves was 3 to 24 seconds with a mean of 17.5 seconds. With persistence of infusion, there tended to be a gradual increment in the defecation urge pressures.

In figure 7 the distal tube was located in the anal canal. For the 30 minutes following an inert suppository insertion there was nearly continuous phasic activity, unassociated with any sensation, with a frequency of four to seven per minute, duration of 8 to 11 seconds and pressure of 6 to 16 mm Hg. This activity could be reproduced in all subjects by locating the distal tube in the anal canal. With a saline infusion-induce-

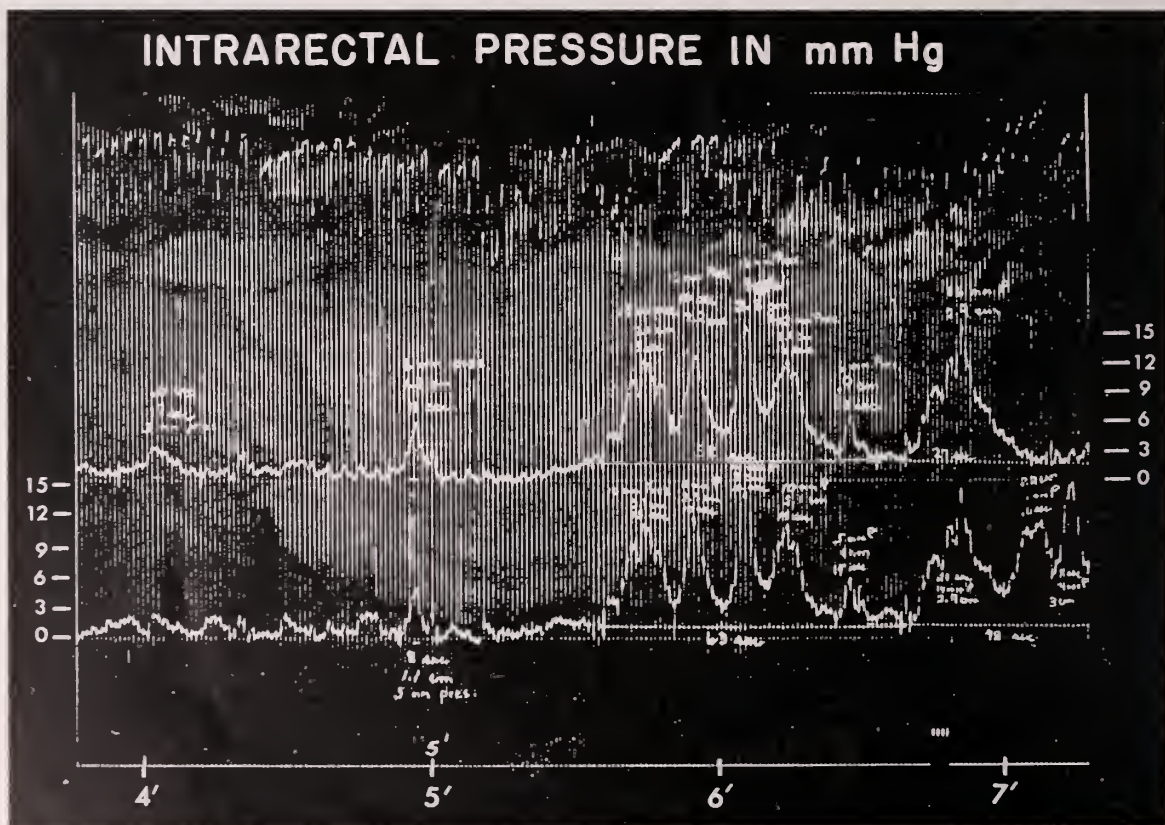


Figure 4. Active suppository. Male, age 19. Striking urgeless pressure may precede urge associated pressure wave (base line mark to the left). Such apparently induced urgeless activity occurred only in subjects below age 50.



## INTRARECTAL PRESSURE IN mm Hg

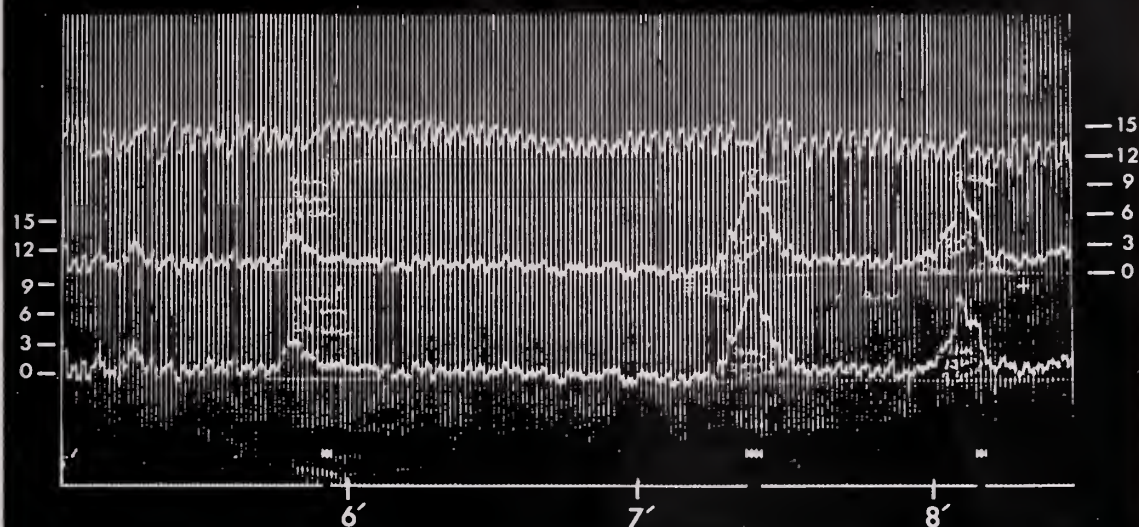


Figure 5. Placebo suppository, no response for 30 minutes, followed by saline infusion, 10 ml/minute. Base line time calculated from initiation of saline. Male, age 75. Note cessation of all activity prior to urge-associated pressure wave and absence of increasing pressure with continuous saline infusion.

## INTRARECTAL PRESSURE IN mm Hg

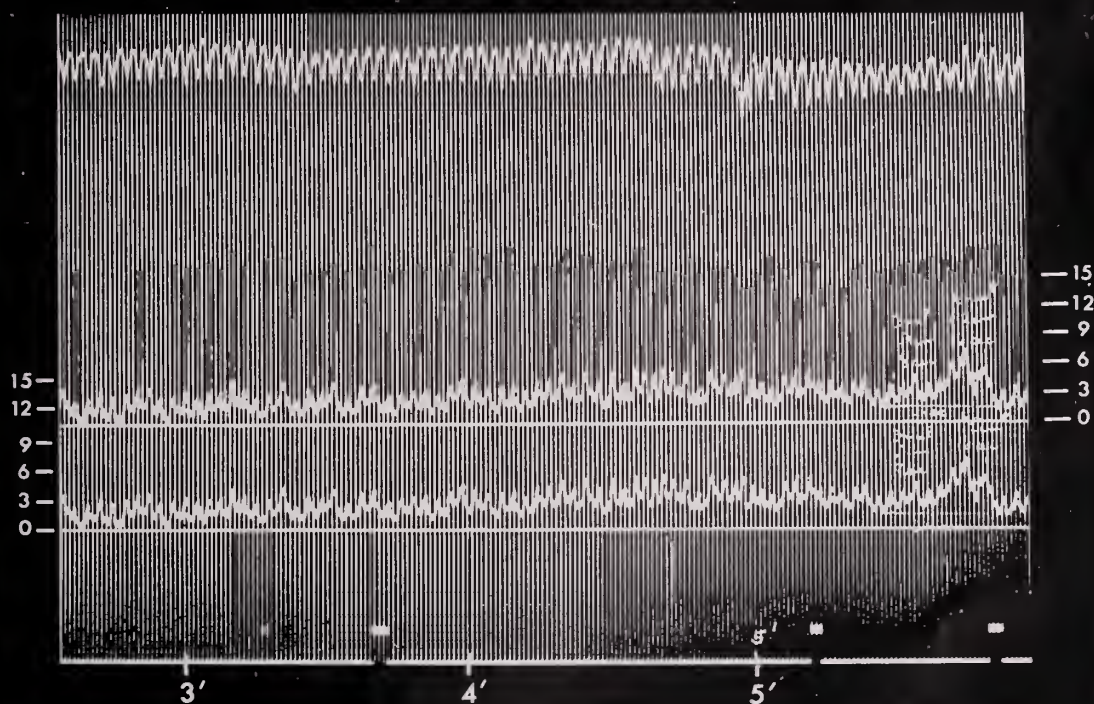


Figure 6. Active suppository, no response for 30 minutes, followed by saline infusion. Male, age 50. Only subject demonstrating gradual increase of intrarectal pressure with constant saline infusion until urge-to-defecate associated pressure wave at 5.27 minutes. Base line markers to right of urge, indicate subjective vague discomfort but no urge.

ment of a defecation urge, which was principally associated with the pressure wave recorded from the proximal tube of six to eight mm Hg, it was noted there occurred a pressure of lesser magnitude in the distal tube, three to five mm Hg, followed immediately by a pressure wave of considerably greater degree ranging from 6 to 22 mm Hg. The last pressure wave was always greater than the urge-associated pressure wave recorded by the proximal tube. This pattern persisted through six induced urges, the sixth being followed by a distal tube pressure increment to 40 mm Hg and then a sudden decline when actual defecation occurred. With each of the distal tube pressure increments after a defecation urge the subject commented on a drawing sensation in the anal area.

### Discussion

Only impressions may be given due to the insufficient number of subjects studied for this preliminary report.

The suppositories used to induce a defeca-

tion-urge do so partly because of their space occupying character in view of the 40 per cent incidence of defecation urge with the inert agent. There is, however, a distinct difference between the active and inert suppositories as evidenced by the greater magnitude of induced pressures by the former. That the suppositories *per se* do not consistently induce activity is suggested by the same type and frequency of resting activity in the rectum occurring before and after suppository-insertion in the majority of cases. A notable difference from earlier studies as regards the amount of time during which activity is present in the resting bowel is the considerable decrease in total activity time, from 50 to 12 per cent. This might be attributed to the mass effect of the balloons utilized in the past. The low pressure phasic activity is of uncertain purpose in the rectum but may be similar to the Type I waves recorded in the more proximal colon and associated with a kneading or churning function. The less rhythmic moderate pressure wave corresponds to the Type

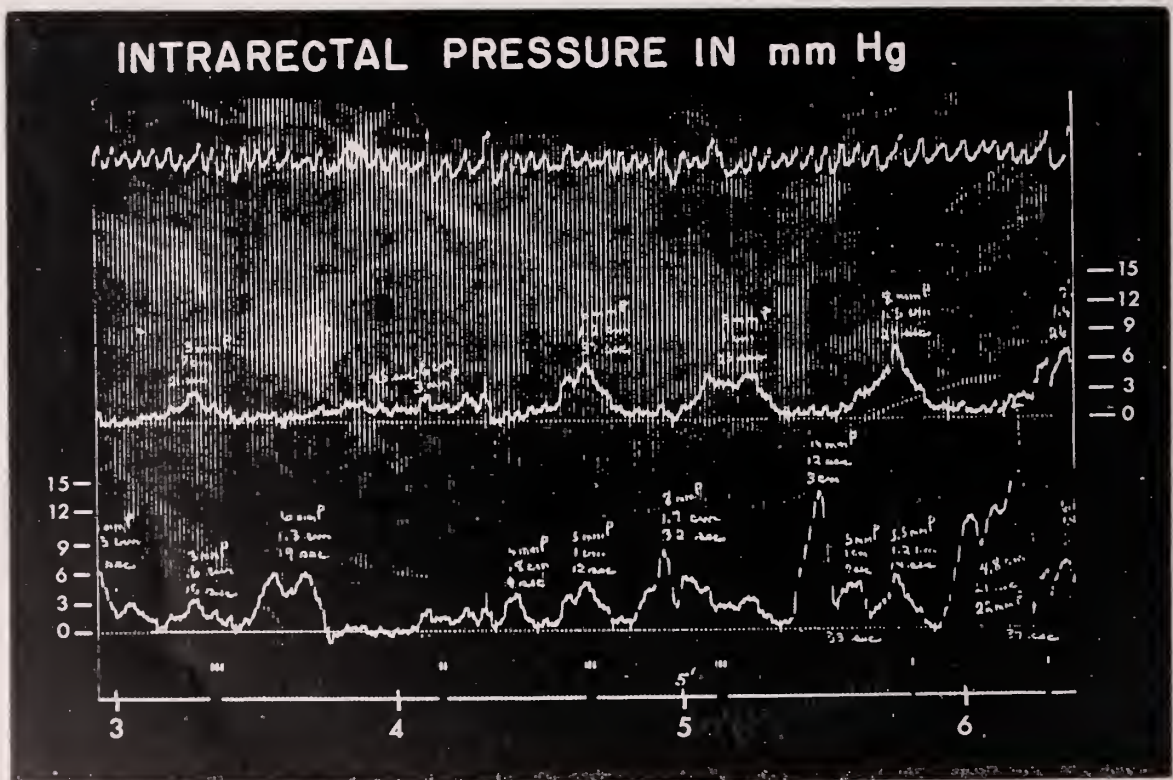


Figure 7. Placebo suppository, no response for 30 minutes, followed by saline infusion. Female, age 33. Distal tube located in anal canal. All base line marks indicate urge. Note lower magnitude of urge-associated pressure distal than proximal tube followed by higher pressure wave in distal tube alone. Suggests continence function of external anal sphincter.



II waves associated with the haustral marking contractions which tend to segment and mix the fecal bolus.<sup>5</sup>

Pressure as such does not seem to have any bearing upon inducement of the urge to defecate, inasmuch as there was no gradual increment of pressure preceding the defecation-urge with the exception of the one saline infusion subject (figure 6). The rectal wall apparently relaxes in response to a volume movement into the rectum thereby maintaining a stable pressure. A stretch receptor, on the other hand, might well explain the means by which the defecation urge is induced for the waves of pressure occurring simultaneously with the defecation-urge commence only during volume changes. Following a change in volume, the urge subsides which correlates well with the rapid decline in pressure, presumably as the result of rectal-wall adaptation. The defecation-urge thus seems to be derived from a contraction of the rectal wall in response to a volume change stimulating a stretch-receptor. The volume change necessary to induce this contraction ranges between 25 ml and 125 ml with a rate of change of 10 ml per minute as suggested by the saline infusion recordings. Whether faster or slower infusion rates alter the magnitude of volume change necessary to induce a contraction has not as yet been determined. The one case showing a gradual increase in intrarectal pressure until a defecation-urge occurred warrants study of more subjects to be certain that pressure is not involved in inducing the urge-to-defecate contraction. The rise in pressure in this case may have been the result of compartmentalization of the infused fluid and absence of rectal wall accommodation.

Another method of inducing a defecation-urge is that of stimulation of the anal canal through manipulation. This is suggested in part by the contractions occurring following insertion of inert suppositories and, more recently, by the inability of two subjects to retain either inert or active suppositories for longer than 30 to 60 seconds before expelling them. The location of the receptor initiating the defecation-urge by anal manipulation is unknown.

The continuous activity recorded from the distal tube located in the anal canal, figure 7, in the absence of similar pressure waves more proximally, suggests that external anal sphincter contraction may be responsible with the purpose being maintenance of continence. The continence function is further supported by the increase in distal over proximal tube-pressure during defecation-urge contractions. Whether or not the maximum pressure tolerated before incontinence occurs is 40 mm Hg, as suggested by figure 7 and one other subject, requires more study.

Besides substantiating our initial impressions regarding the relationships among pressure, volume change, and the defecation-urge, the current model of study might very well aid in answering some of the following questions:

1. What are the effects of age, sex, position and lack of physical activity upon inducement of the defecation-urge?
2. How far proximally will the propulsive contraction extend of an urge to defecate initiated in the rectum?
3. What are the bases of the sensory and motility problems that prevent or inhibit the defecation-urge in patients with fecal material which accumulates either in the sigmoid colon or in the rectum?

#### Preliminary Conclusions

1. Pressure *per se* does not initiate the defecation-urge.
2. The urge to defecate is seemingly initiated by a volume change in the rectum.
3. The urge to defecate objectively coincides with an increase in rectal pressure, presumably on the basis of a propulsive contraction of the rectal wall.

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#### "PORTABLE BULLETIN BOARD" OF MEDICINE

Essentially the state journal is the tie that binds. It is the visible thread that runs from one corner of the state to the other. It is the only such ligature. It is an opinion medium for legislative, medicolegal, organizational, economic, and administrative topics. It is the officers' way of reaching the membership; and it is the members' way of letting the officers know what they — the members — think. It is a portable bulletin board for telling the readers what's going on. Without this liaison among members, their esprit-de-corps, their feeling of professional identification, and their sense of organizational identity might well atrophy. (Henry A. Davidson, MD, in *Journal of the Medical Society of New Jersey*, 61:1 (Jan.) 1964.)

# Bowel Evacuation

## IN INFANCY and CHILDHOOD

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**C**ONSTIPATION and problems related to bowel evacuation are encountered in the neonatal period but more frequently, during infancy and childhood. The problems of each of these groups are similar, but unique difficulties occur during the neonatal period usually as a result of structural abnormalities or constitutional disorders. The neonatal period covers premature infants and full-term infants up to two months of age. By the end of the two-month period, most of the severe congenital anomalies will have been encountered; bowel manifestations of metabolic diseases will have begun; decisions will have been made if artificial feeding is to be followed; and the infant will be receiving solid foods in most instances. The period of infancy extends to the age of two years, since this is about the optimal age when bowel training is likely to be progressing satisfactorily and the infant's diet will have been given up in favor of table food of the family. Arbitrarily, we consider as childhood the period after two years.

Constipation in these or any other age groups is a condition in which bowel evacuation is incomplete or difficult and the resulting stools are not of normal consistency. The term, *constipation*, is more correctly applied to the passage of hard stools and wrongly applied to the problem of children who have infrequent yet normal stools.<sup>1</sup>

### Neonatal Period

In the infant free of congenital or metabolic defects, concern is related largely to prevention of constipation. The newborn infant has a stool after nearly every feeding.<sup>2</sup> By the end of the first week of life he will have probably three to five stools per day,<sup>3</sup> and soon thereafter he may have only two to three. Seldom is the breast-fed infant constipated; in fact, the stools frequently are so loose that they may be watery.

Breast-feeding is now so uncommon that infants so fed sometimes are thought to have diarrhea. Constipation is much more common in the infant fed a cow's-milk formula. Such an infant may be constipated even though he passes one or two formed movements per day. The mother's attention should be directed to the consistency and size of the stool, particularly of the bottle-fed infant. It should be no firmer than pasty.

Varying degrees of constipation result in either the breast-fed or artificially-fed infant from inadequate food intake and, in the bottle-fed infant, from an insufficient amount of fluid in the formula. If vomiting is present, its underlying cause should be corrected so that the stool is not robbed of its fluid for the body economy.

Constipation during the neonatal period may be related to structural abnormalities. Fissures may result from constipation itself or from digital examination during the first few days of life. Infrequently, meconium plugs can produce abdominal distention. If they do not pass spontaneously, they can be removed by digital examination or with a small saline enema. A spastic rectal sphincter can be dilated gently by the physician and, after instruction, by the mother's small finger covered with a finger cot. Fistulas through which stools may be passed, imperforate anus, and congenital megacolon (of Hirschsprung) require surgical correction.

### Infancy Period

Prevention of constipation during infancy requires not only attention to the diet in general, but to the excessive use of bovine (cow's) milk in particular or commercially prepared preparations of it. The total intake of cow's milk should not exceed one pint to one quart daily. An unbalanced proportion of this standard item of children's diets

may lead to constipation and iron deficiency anemia. During infancy, frequent infections of the respiratory and other systems may cause mild to moderate dehydration, thus producing constipation due to inspissation of the stool. As a result of passage of one or more large boluses of stool, a rectal fissure may form. Fissures may also be associated with the irritating stools of gastroenteritis. As a result of painful evacuations due to fissures, large stools, or a combination of both, a conditioned reflex may be established and the infant may develop "fear of the pot."<sup>4</sup>

Infancy is the age of faulty bowel training. In general, bowel training cannot be started too late but it is often started too early. A bowel movement is a normal function and should not be associated with reward or punishment. In particular, it should not be "coercive."<sup>5</sup> Ideally, a child's bowel training should be started, preferably using a potty chair, when he is 18 months to two years of age. The potty chair designed for the child combines the desirable and abolishes the undesirable elements to favor correct bowel training. In particular, it allows his feet to rest on the floor so that their effective pressure may aid in evacuation.<sup>6</sup>

### Childhood Period

In the early years of childhood the mother usually is familiar with the quality and frequency of stools. However, by school time, because of modesty, pride, or other reasons, frequently it is only the child who can give a history of his own stool habits and he is usually totally unaware of what is normal since he has had but a single experience. It is during kindergarten and early school years that one may see an extreme degree of constipation in which rectal and colonic dilatation as well as the size of the occasional stool parallel those seen in true Hirschsprung's disease. The nonorganic or functional type of constipation, although frequently referred to as psychogenic, rarely requires formal psychotherapy. Functional constipation may be atonic or spastic in nature; the spastic type is often related to abdominal pain in childhood.<sup>6</sup> Other causes of constipation in the child are prolonged bed

rest for any reason, mental retardation, and fibrocystic disease of the pancreas. The stools of children with this latter disease initially are bulky and loose although later they may be associated with obstipation.<sup>7</sup>

### Diagnosis

Diagnostic methods are carried out with a great deal more ease in infants and children than in adults. Usually, the diagnosis can be made on the basis of history and physical examination alone. A simple method of doing proctoscopy as an office procedure in the infant or child is to use a strong test tube thinly lubricated with vaseline or jelly. This can be inserted into the rectum and the mucosa can be visualized with the ordinary otoscope. The finger cot, being readily accessible and easy to use, is preferred to the rectal glove. Rectal examinations should be a regular part of the infant and small child's examination. When constipation results from so-called functional or psychologic megacolon, the pediatrician will encounter a large mass of feces and the dilated bowel almost immediately after the finger passes through the sphincter. This is in contrast to the true aganglionic megacolon in which the empty rectum is noted. It differs also from rarely encountered Hirschsprung's disease which usually starts early in life and is characterized by a lack of urge to defecate.

### Treatment

There are many successful forms of treatment which require varying periods of time and can be tried singly or in combination.<sup>6, 8-10</sup>

#### a. *The Davidson Method*

The Davidson method of treatment<sup>6</sup> consists of three phases:

(1) *Evaluation* for 2 or 3 weeks during which impactions are removed by hypertonic phosphate enemas, supplemented by mineral oil in large dosage and vitamins.

(2) *Motivation* of the child for toilet training at age three by scheduling a regular time and interval, namely, 15 minutes, when he should remain at toilet with his feet touching the floor. Within six to eight weeks, the doses of mineral oil can be reduced.



(3) *Repeated evaluation* and follow-up without use of laxatives. The dangers of prolonged use of mineral oil must be considered. These include the influence on metabolism of the oil-soluble vitamins,<sup>11-13</sup> as well as the pulmonary hazards of lipid pneumonia<sup>14</sup> and of aspiration pneumonitis, especially in patients with neurologic problems.<sup>15</sup> Practically, these anticipated hazards are rarely met in practice. The Davidson method of therapy is not indicated when the appearance of obstipation is sudden in onset or when systemic symptoms, such as fever, weight loss, or severe appetite change, are present.

b. *Local Anesthetic Ointment or Cream*

Local anesthetic ointment or cream may be applied to any fissures prior to removal of impacted stool either manually or by use of enemas.

c. *Enemas* (combined with laxatives as an alternative to "a")

Daily enemas can be performed with decreasing frequency while laxatives are used to set up a normal bowel habit and regularity. When enemas are used, specific directions should be given as to the content and volume of enema-fluid as well as to the particular apparatus which should be used. The ingredients, dose, and preferred temperature of the commonly used enema is given elsewhere.<sup>16</sup> Tap water or soapsuds enemas are dangerous whenever constipation has resulted in either type of megacolon. Water intoxication may result.

d. *Suppositories*

Of particular interest more recently has been the use of the Pediatric Vacuetts,\* an effervescent suppository which liberates carbon dioxide and stimulates evacuation. This suppository was used successfully in institutionalized spastic and mentally retarded patients to replace enemas.<sup>17</sup> Vacuetts has been highly successful also in replacing enemas in preparation of the bowel for intravenous pyelograms and before instillation of basal or rectal anesthetics, and we contemplate their use for cleansing the

bowel prior to proctoscopic examination. The release of personnel for other activities in the hospital and the less expensive cost of patient care are valuable advantages also gained. The psychologic advantage to be gained at home can be appreciated immediately when the suppositories replace daily enemas, which are frequently difficult for both mother and child and which frequently result in the labeling of constipation as psychogenic.

Prior to development of the carbon dioxide-liberating suppositories, the irritating glycerin suppositories traditionally have been used for infants. Sometimes the irritating piece of white "soap stick" may effectively initiate evacuation as may also the gloved finger.

e. *Stool Softener*

The stoolsoftener, dioctyl sodium sulfosuccinate, is a somewhat effective agent for young babies with hard, lumpy feces as well as for patients with poliomyelitis.<sup>18</sup> This agent when given either by mouth or by enema will soften the stool for easy natural passage.

f. *Bulk Producers*

Bulk producers, such as methylcellulose and similar agents, may be added to the regimen. However, the addition of too many agents complicates the general treatment and lessens the opportunity for success.

g. *Irritant or Stimulant Cathartics*

Irritant laxatives or stimulant cathartics may be used in gradually decreasing quantities with little fear of habit formation as the dose is decreased over a three or four month period of time. The aromatic fluid extract of cascara sagrada is singled out as an effective and quite inexpensive liquid preparation well accepted by children. The several preparations of senna likewise are available and reasonable in price. There is no particular need to worry about standardization inasmuch as the amount of drug is standardized for each individual patient through use. Phenolphthalein is a frequently-used laxative, which by reabsorption and reexcretion may give action on two succes-

\*Vacuetts is the trademark of Dorsey Laboratories for its brand of effervescent suppositories.

sive days. Its repeated use over long periods is not recommended. Castor oil is seldom used but can be given in the tasteless emulsified form. Calomel has no place in the therapy of children and may cause dangerous and even fatal acrodynia. The "drastics," colocynth, croton oil, gamboge, jalap and podophylin, are mentioned only to be condemned.

#### h. *Saline Cathartics*

Except for milk of magnesia and citrate of magnesia, the saline cathartics are generally not well taken by children.

#### i. *Other Aids for Special Use*

Pancreatin in adequate and regular dosage has been suggested as a digestant, supplemented by repeat enemas containing pancreatin or perhaps the mucolytic agent, N-acetyl-L-cysteine, for fecal retention in children with cystic fibrosis.<sup>7</sup> In this disease in the newborn period, meconium ileus may cause intestinal obstruction in spite of a patent bowel. Treatment for this disease includes early recognition and, at the present time, surgical treatment. N-acetyl-L-cysteine may offer specialized benefits either by enema or possibly by the long tube. Constipation as a manifestation of other diseases is appropriately treated; namely, in cretinism, constipation just as other characteristics of this deficiency will respond to thyroid.

### Summary

The difficulties relating to bowel evacuation in pediatric practice usually results from improper feeding technics, metabolic defects, or faulty bowel training. However, in some instances they may be associated with congenital defects or structural abnormalities. Until the diagnosis is established and the cause determined, proper treatment cannot be instituted. The various recommended methods of treatment of constipation are reviewed briefly. The practical advantages, specifically of an effervescent, carbon dioxide-liberating suppository, to evacuate the

bowel and to prepare the infant or child for radiologic, proctoscopic, or surgical procedures, have been described.

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# ***Bowel Content Elimination***

**L**ITTLE attention has been paid in the obstetric and gynecologic literature to problems of bowel elimination, and the comments made are generally perfunctory and often contradictory. For example, one standard text may suggest that mineral oil is an excellent laxative in pregnancy while a second warns against its use. The value of ingesting large quantities of fluid may be extolled by one author while the next points out that it is of little value.

The physiology and pharmacology of the problem has already been well discussed, and I would like to confine myself to some clinical comments on three areas of the problem: (1) Bowel evacuation in pregnancy; (2) bowel evacuation in post-partum period; and (3) gynecologic problems of constipation. Since woman has been defined as a constipated biped with backache and presumably this backache is attributed to constipation, this surely is a subject that should receive more emphasis in our field.

In pregnancy, both intrinsic factors of decreased motility and extrinsic mechanical factors of compression are likely important. Alvarez and Hosai<sup>1</sup> studied intact bowel and excised segments in pregnant and nonpregnant rabbits. Reduced rates of rhythmic contraction, fewer and slower peristaltic rushes, and impairment of conduction were observed in the pregnant animals.

It is probable that this decreased motility is on the same hormonal basis as that observed in the ureter. Constipation may be aggravated since reduced propulsion will lead to increased fluid absorption and a small hard stool which may fail to initiate factors of rectal distention as Dr. Paustian has outlined. Mechanical factors are definitely important: first the enlarging uterus; and, late in pregnancy, the presence of the fetal head. With advancing pregnancy there

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is increasing dextrorotation of the uterus because of the presence of the sigmoid colon and surely the uterus exerts some reciprocal pressure on the lower bowel. With development of the lower uterine segment, and particularly with engagement of the fetal head in the maternal pelvis late in gestation, a real mechanical problem develops, since the fetal head indeed almost totally fills the pelvic cavity.

Forty cases of true pregnancy ileus have been reported.<sup>2</sup> The bowel-musculature-paralysis is usually limited to the colon and while conservative treatment is reported to be satisfactory, this exaggerated product of the normal physiological changes must be considered. Congenital megacolon has been occasionally reported during pregnancy and would certainly require most careful management if there had been no prior surgical correction. Satisfactory results in management of the general problem in pregnancy have been achieved by either a combination of stool softener and bowel irritant, calcium bis (sulfosuccinate plus danthron) orally, or the stimulant suppository, (Dulcolax).

At the time of labor it has been traditional to give the admitted patient a substantial enema so that fecal material in the colon will not obstruct descent of the fetal head nor soil the operative field at the time of delivery and repair. The irritant or evacuant suppositories have been suggested as alternatives to this enema. The gas produced by the evacuant suppository may sometimes rise higher in the colon and be trapped there by descent of the presenting part and this is



not a wise choice. Clinical experience with the irritant suppository replacing the enema has been generally satisfactory.

In the immediate post-partum period some degree of ileus is normal. The abdomen remains distended after the uterus is considerably reduced in size and bowel may dilate to occupy this area. This is particularly likely to be a problem after a very large infant or after a twin delivery. Additional factors involved are weakness of rectus muscles, the enema given at the beginning of labor, low fluid intake over a 12-24 hour period and perineal pain present either with episiotomy or with the often present hemorrhoids. All of these factors contribute to delayed bowel evacuation in the post-partum period, and it is not routinely expected until at least the third post-partum day. While the use of enemas in this period is a nursing custom dating back to antiquity, there seems little reason for this practice. The stool softeners or combination stool softeners and bowel irritants used orally will re-establish normal bowel patterns at a physiologic time.

It is worthy of mention that mechanical bowel obstruction and volvulus are not unusual in the immediate post-partum period. With previous surgery or abdominal inflammatory disease there is considerable bowel mobility and relocation as the uterus regresses in size and adhesive bands are likely to manifest themselves. The volvulus is probably on the same basis of increased bowel mobility and neither of these possibilities should be neglected in the post-partum patient with persistent bowel symptoms.

In the field of gynecology, constipation is frequently a problem, but there are two particular circumstances worthy of mention. As Dr. Welsh has pointed out, contraction of the levator ani muscle is important in bowel-emptying. This muscle is frequently weakened and separated in the multiparous female and this may be a contributing factor in constipation. The presence of a rectocele will often cause large accumulations of fecal material in the rectum, apparently associated with a loss of distensibility sensation. These patients report that it is necessary to place two fingers in the vagina and push downward and backward to achieve bowel evacuation. This symptom is, of course, amenable to surgical repair.

Constipation is often the first symptom of organic pelvic disease, and this possibility must be considered. While diverticulitis is stated to occur classically infrequently under the age of 40, we see it not infrequently in this age group, often with initial constipation. Endometriosis is likely to be manifest with bowel symptoms occurring primarily at the time of menses and this is a helpful diagnostic point. Ovarian tumors and ovarian malignancy are notoriously silent tumors and retrospective studies suggest that disturbances in bowel function are often the initial overlooked sign. In summary, the increased knowledge of bowel physiology should enable us to recognize what is normal and to treat what is abnormal in a more physiologic manner.

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Most people who suffer from epilepsy could lead active, normal lives — if they weren't walled in by the fear and superstition of their neighbors. The Epilepsy Foundation is currently sponsoring Epilepsy Information Month, to dispel the myths about this malady. For additional facts, write to The Epilepsy Foundation, Washington, D.C. 20005.

# The GERIATRIC and BEDRIDDEN PATIENT

and the

## Large Bowel

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**A**T the present growth rate our geriatric population is predicted to increase from roughly 14 million to 21 million — 1958 through 1975.<sup>1</sup> During 1961 it was estimated that 45 per cent of hospital patients were beyond age 60.<sup>2</sup> Further extrapolation should convince us that geriatric medicine will provide a major part of future medical practice. Therefore, these sobering facts should alert us to the awesome responsibility we face. No one can doubt the significance of the enlarging sociological and medical problems this should engender.

Gastrointestinal complaints are commonplace in the elderly; yet literature on the subject remains limited.<sup>3-7</sup> In particular, there is a paucity of information concerning the colon. Facts relating to smooth muscle atrophy, decreased intestinal tone, and deficient peristalsis have little substantiating proof. Clinical observation of gastrointestinal problems in older patients differs little from younger individuals. Contrary to a common belief, there is no evidence of a "wearing out" process of the digestive tract.<sup>8</sup> It is more likely the gastrointestinal tract outlives the body.

Constipation continues to be one of the most frequent symptoms after age 60.<sup>3</sup> In the elderly it presents as a variegate problem, and too often its seriousness is grossly underestimated. Normal bowel habits can vary from one following each meal to two or three per week. Arbitrarily constipation is said to exist when there is no bowel movement in 48 hours.<sup>9</sup> A better definition would include a change of habit in which there is either infrequent bowel movements, incomplete evacuation or inspissated stool.

Various anorectal disorders including hemorrhoids, fissures and prolapse (rectal or uterine) can be directly or indirectly traced

to constipation. Straining at stool has been a factor considered in inducing femoral, inguinal or ventral hernias. Since these conditions occur rather frequently in the older age group, there has been speculation that loss of elastic tissue is a prime factor. Constipation has also been implicated in such entities as diverticulosis and volvulus, both of which are found more frequently in the aged.

Surprisingly, there has been little added in defining the causes of constipation since the classic work of Hurst.<sup>9</sup> By necessity I intend to confine the following remarks to more common causes. Undoubtedly, the list could be expanded to become more inclusive; however, I found too many discrepancies which only serve to confuse the reader.

### Dietary

Dietetic problems are common to the elderly. A common practice is purchasing a deficient diet as a result of its high cost and lack of proper storage space. Many diets of the elderly lack in bulk material and, as a result, are deficient in stimulating peristaltic activity.<sup>7</sup> Anorexia undoubtedly plays a major role in selecting the diet; however, its influence remains unknown. Dental disorders, particularly in the edentulous, continue to be of major importance. Undoubtedly, deficiencies in minerals and vitamins play an important role in constipation; however, the part they play is still speculative. Adequate fluid intake is important for mastication and deglutition; however, its role in the rest of the gastrointestinal tract remains obscure.

### Psychogenic

That emotional factors remain a potent force in bowel disorders cannot be denied by present day physicians. One needs only



to review the voluminous literature on the subject to be convinced of its importance. Psychiatric problems in our aging population remain commonplace.<sup>10</sup> In 1958, thirty-three per cent of private patients in mental hospitals were 55 years of age.<sup>11</sup> A multitude of various depressions still plague our elderly with reactive type the most common.<sup>12</sup> Often such problems are marked as a simple constipation. A background of dependency and rejection appears to underlie many of the psychiatric disturbances of the elderly.<sup>13</sup> There is ample evidence that the cerebral cortex and the vegetative system affect the colon and can be a reflection of emotional upheaval. There is still a great deal of controversy as to whether disturbances of the colon in these cases results from parasympathetic understimulation or sympathetic overstimulation.<sup>14, 15</sup> Clinical evidence supporting the role of the nervous system in constipation is found in reports of megacolon in the psychotic<sup>16</sup> and in taboparesis.<sup>17</sup>

#### **Physical Activity and Muscles of Expulsion**

Weiss<sup>18</sup> alludes to the stimulating effect of exercise. Less appreciated are facts concerned with diminished forces that are concerned with eliminating stool.<sup>19</sup> Abdominal muscles can be weakened by age and chronic disease. The diaphragm in turn may be affected by various cardiopulmonary disorders and the pelvic floor damaged through surgery, pregnancy, or overstrain.

#### **Drugs**

Laxatives have been touted as a common cause of constipation. I am sure few would take issue with this statement. It is becoming increasingly evident that various drugs constitute an iatrogenic basis for an increasing incidence of constipation.<sup>20</sup> It is not surprising how frequently tranquilizers and opiates are prescribed for geriatric and bedridden patients. The latter drugs are potent inhibitors of colonic activity. Antispasmodic as well as insoluble antacids are frequently used to combat a variety of gastrointestinal complaints. As a result of the increasing use of various drugs with constipatory side effects, laxatives are beginning

to lose their place as a common cause of constipation.

#### **Miscellaneous**

This group comprises a heterogenous one. Foremost among them is rectal constipation which, in many cases, is the result of a lifelong faulty defecatory habit. On a number of occasions anorectal disease such as hemorrhoids or fissures induce sphincter spasm and thereby produce constipation. Diseases in other organs such as gallbladder or kidney can produce constipation through some presumed reflex mechanism. Other reflexes such as gastroilio and/or gastrocolic reflexes may be diminished because of diseases of the stomach.

#### **Treatment of Constipation in the Elderly and Bedridden Individual**

From the preceding discussion one can conclude that there is no panacea in treating constipation. Obviously, a multidirectional approach is necessary.<sup>21, 22</sup> First and foremost, organic disease should be corrected. Next, an attempt should be made to avoid the "laxative habit." To curtail its use without other measures is likely to be doomed to failure. An aggressive-positive attitude is most important. Diet control plays an extremely important role, and is supported by the observation that one out of every four persons is habitually constipated because of some dietary inadequacy.<sup>7</sup> Proper bulk and cathartic food requirements are met by utilizing liberal amounts of fruits, vegetables, and cereals. Obviously, the diet must be arranged to suit individual needs. As so often happens, patients present themselves with special problems such as obesity, peptic ulcer, cardiac disease, and many other disorders. In these cases it is necessary to work out a dietary formula with a competent dietitian.

Ordinarily, fluid intake constitutes no problem. Bedridden patients, however, seem particularly prone to desiccation. In many cases, simply increasing the fluid intake will correct a seemingly obscure cause of constipation.

Exercise is often neglected and can spell the difference between success and failure. General reconditioning can be accomplished



by swimming or walking. Equally and sometimes more important, exercise should be directed to increasing strength of abdominal and perineal musculature. Establishing proper defecatory habits may require some ingenuity and persistence. At times it may be necessary to instruct the patient on a proper time, free from worry. At times it may even be necessary to acquaint them with the proper posture for evacuation.

One cannot overemphasize the important role that emotional and psychiatric disorders play in constipation. It is not uncommon to find constipation to be actually a signal of a serious depression. A proper psychiatric approach may avert a potential suicide.

Unfortunately, there are a significant number who may fail to respond to simple measures, and out of exasperation it may be necessary to prescribe cathartics. Some individuals are unable to discontinue cathartics because of long time habit. Others may be too neurotic or psychotic to dissuade them from using such agents. Additionally, others through no fault of their own must continue on restricted diets or constipatory drugs. The bedridden patient often needs some agent to eliminate his stool.

What determines a proper laxative is a difficult question.<sup>23,24</sup> Theoretically, it should be mild, effective at all times, and free of any serious side effects. Too often the type is dictated by the patient or is a result of the preference of a physician.

Mineral oil at one time enjoyed an immense popularity; however, it caused too many difficulties.<sup>25</sup> Among these have been lipoid pneumonia, loss of vitamins, minerals, and calories. Hydrophilic colloids may have a place in therapy especially in cases where a scybalous stool has been produced. When used alone, they seem to lose their effectiveness; however, this may be increased by combining it with stool softeners or rectal stimulants. Another disadvantage is its ability to produce fecal impactions. The mode of action of most bulk producers appears to be through their ability to imbed water.

At the present time stool softeners (most of which contain dioctyl sodium sulfosuc-

inate)<sup>26</sup> enjoy a certain popularity. In general, they react by reducing the surface tension of intestinal water and thereby soften the fecal mass. Their advantage lies in softening rather than increasing the bulk of the stool. By such a mechanism they decrease straining. Obviously, this is a particular advantage to the elderly and bedridden patient.

There are times when stimulatory laxatives may be required. Bisacodyl, first introduced in 1953,<sup>27</sup> has been found to be an effective rectal stimulant, but I do not advocate its use as a routine measure. However, it may have a place in treating one with an obstinate constipation problem. Recently, Vacuets<sup>®</sup><sup>28</sup> similarly has proven to be effective. Like so many other types of medication, familiarity with the drug will probably determine its use. Although enemas have their place, injudicious use has been noted to produce fluid and electrolyte imbalances and, much too frequently, colonic perforations.

### Fecal Impaction

One of the more serious complications resulting from constipation is fecal impaction.<sup>29,30</sup> In this disorder there is retention and accumulation of feces in both rectum and colon leading to partial or complete obstruction. During the preceding discussion on constipation, most of the factors leading to its production have been presented. It seems to occur most frequently in bedridden individuals, those with central nervous system diseases, or following surgical operations.

Neglect seems to be its greatest ally. Often its symptoms are vague and insidious in development. Impaction associated with the passage of liquid stool is not infrequently misinterpreted by the uninitiated physician. He is likely to respond by prescribing anti-diarrheal agents. No diagnosis is simpler if one but resorts to the simple expediency of a rectal examination.

The primary therapeutic aim is to empty the bowel as quickly as possible and by whatever means is necessary. Clearance can usually be affected through appropriate enemas and mechanical fracture of the fecal

\*Vacuets<sup>®</sup>, a product of Dorsey Laboratories, Lincoln, Nebr.

mass. Softening of stool can be accomplished through oil-retention enemas or enemas containing bisacodyl. One may have to resort to hydrogen peroxide enemas; however, this particular enema may incite a severe proctitis. If the stool cannot be loosened from below, a rectal tube inserted above the fecal mass may allow the appropriate enema to force it down. It must be done with caution. On rare occasions an exploratory abdominal operation may be required and removal of stool accomplished at this time.

No simple, harmless procedure will work rapidly. In some cases, it may require days or weeks to eliminate the problem. After its removal, prophylaxis is the keynote. Until normal pattern of stool evacuation can be established, laxatives or enemas may be required. In closing, a word of warning should be given. No laxative such as castor oil or equivalent should be used because of its tendency to induce complete obstruction or rupture a colonic diverticulum.

Complications do occur with fecal impaction. Stercoraceous ulcer,<sup>31</sup> perforation, and bleeding are rare occurrences and when present can be attributed to neglect. Needless to say, the medicolegal implications are quite obvious. Impactions that are high may remain for years and there is one report in the literature of a death of a mental patient who had a 16-pound-fecal collection. Other oddities concerned with this disorder have been urinary retention and inadvertent operations for suspected neoplasm.

### Effects of Constipation on the Vascular System

At this point it seems pertinent to describe the normal physiological act of defecation. Fecal material of sufficient amount will distend the rectum and initiate a coordinated effort of voluntary as well as involuntary action resulting in peristalsis and sphincter relaxation. The simultaneous contractions of thoracic, diaphragmatic, and abdominal muscles increase intrathoracic, intraabdominal, and intraluminal pressures. As a result, feces are readily evacuated.

The straining forces of bowel function ap-

pear to have far reaching cardiovascular effects.<sup>32</sup> This is particularly noted in the constipated elderly and bedridden individual. When straining pressures reach valsalva proportion (40 mm mercury sustained 8 to 10 seconds) there results a sequence of circulatory dynamic changes. Such forces can precipitate tragic consequences. The dangers are proportional to the intensity and duration of exertion. Bedridden or cardiac patients requiring bedpans are particularly in jeopardy.<sup>33</sup>

Straining at stool stresses the cardiovascular system through a variety of mechanisms. Basically, straining at stool seems to involve a valsalva maneuver consisting of a period of force divided into two phases followed by a period of relaxation similarly divided into two phases. Phase one begins with compression of the thoracic and abdominal cavity. Almost immediately, the pulmonary circuit is emptied of blood and for a short period increases cardiac output. As a result there is an elevation of the systemic blood pressure. With continued strain a precipitous drop in systemic blood pressure occurs accompanied by a fall in cardiac output. Compression of the major veins emptying into the right heart decreases venous return and readily explains a number of changes. As a result, there is reduced coronary perfusion which is reflected by various electrocardiographic changes. Halpern<sup>34</sup> noticed abnormal EKG changes in 2.5 per cent of healthy individuals subjected to the stress of valsalva. It is therefore not surprising that death may ensue in the elderly or cardiac patients as a result of some arrhythmia or myocardial infarction.

The second phase begins with a rising blood pressure that results from stimulation of a carotid sinus mechanism. During this period there is continued reduced venous return to the heart with pooling of blood in both the caval and vertebral venous systems.<sup>35, 36</sup>

With the release of strain forces, phase three is initiated by a sudden rush of blood into the heart. As a result, there again is a drop in the arterial blood pressure. Lasting briefly, it stimulates a mechanism which in-



creases blood pressure. The systemic blood pressure overshoots its resting value by a considerable degree. Both an increased cardiac output and sympathetic discharge accounts for its marked rise.

The effects of a valsalva maneuver on the cerebral vascular system is by its action on the vertebral veins.<sup>39</sup> These latter veins are in direct communication with the caval system of veins. Serving as a shunt mechanism for vena caval veins, they directly reflect changes of the systemic venous pressures. Housed in the spinal canal, their pressures are transmitted in turn to the spinal fluid. As a consequence, spinal fluid pressure compresses cerebral arteries and reduces circulation to the brain. A valsalva phenomenon in individuals with cerebral arteriosclerosis may precipitate an acute cerebrovascular accident. During the fourth stage of the valsalva maneuver, increased blood pressure as well as increased cardiac output could conceivably lead to rupture of small vessels and a subsequent cerebral hemorrhage. Electroencephalographic studies in normal dogs subject to valsalva procedures attest to cerebral circulatory changes.<sup>38</sup>

Pulmonary embolism accounts for a number of deaths related to strain attending bowel movements. It is presumed that rapid changes of blood velocity and changing diameters of veins detach clots and propel them towards the lung.<sup>38</sup> The high incidence of thrombi in the lower extremities of elderly and bedridden patients make this a frightening prospect.

Equally important variations in arterial circulation have been found during strain of bowel movements. Dr. Selman<sup>39</sup> reports that blood flow in peripheral arteries is reduced in 95 per cent of subjects undergoing valsalva stress. Vessel constriction was noted to play a role, and it was thought this might induce peripheral gangrene in the toes of susceptible persons.

Intraluminal colonic pressures when produced in excess can cause disastrous changes. Excessive intraluminal pressure may lead to pain, collapse, respiratory and cardiovascular changes. In some cases, there was interference with blood supply to the gut

with subsequent gangrene, perforation, and peritonitis. Whether serotonin is important to these mechanisms remains unknown.

### Summary

The care of aged and bedridden patients is assuming a more prevalent and important role in the practice of medicine. The disorders discussed do not differ qualitatively from those of the younger age-group but seem to differ in some respects quantitatively. Constipation is a relatively frequent complaint. Its seriousness should not be underestimated. This is evident in its relationship to fecal impaction and cardiovascular changes produced by straining. Little has been added to our knowledge on the causation of constipation during the past sixty years. Treatment, to be effective, should employ multiple approaches.

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"... Nothing is worse for one's health than to be in fear of death. There are some so wise as neither to hate nor fear it; but for my part I have an aversion to it, and with reason — for it is a rash, inconsiderate thing that always comes before it is looked for; always comes unseasonably; parts friends, ruins beauty, laughs at youth, and draws a dark veil over all the pleasures of life. This dreadful evil is but the evil of a moment, and what we cannot by any means avoid." (Quoted by Walter C. Alvarez, MD, in an editorial in *Geriatrics*, July, 1964).

# ***Bowel Preparation For Proctosigmoidoscopy***

**T**HE successful termination and adequate interpretation of the proctosigmoidoscopic examination is directly dependent on the degree and diligence of cleansing the lower portion of the bowel.

Some patients whose bowel habits are sufficiently regular may be examined several hours after defecation. In my experience, these fortunate individuals are in the minority. More often, the physician is confronted by a patient who relates that successful defecation was achieved only a few hours earlier, but digital examination reveals that the rectum still contains fecal matter of a quality that precludes visual examination of the bowel. Such is certainly the case in the majority of patients with anorectal complaints.

One of the arguments against bowel preparation prior to proctosigmoidoscopy is the minimization of the detection of a possible source of bleeding. Our experience is contrary to this view. Suspicious-appearing mucosal regions are rendered more readily discernible in the prepared bowel. Their surfaces can be wiped or stroked with cotton on a long applicator or with the edge of the instrument to elicit bleeding. Another factor, often overlooked in the need for a clean bowel, concerns a greater probability of introducing the sigmoidoscope to its full length; this allows verification that the bleeding source may be more oral than can be directly visualized. Also, an instrument possessing greater length (for example, 35 to 40 cm) often may be utilized to define the lesion and procure a specimen for pathologic study. Bleeding that has its source at a higher level in the bowel than can be visualized through the instrument should alert the roentgenologist and make him doubly diligent in his search for this source of bleeding.

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## **Methods of Bowel Preparation for Proctosigmoidoscopy**

Cleansing the lower portion of the gastrointestinal tract usually is carried out by the introduction of various liquids through the anal orifice. Water, either warm or hot, is the usual vehicle, although milk and oil can be used. Into this vehicle is introduced soap, glycerine, molasses, salt, or, at times, hydrogen peroxide.

All of these substances are foreign to the bowel and may cause mucosal changes or spasm of the wall. Hydrogen peroxide causes a proctitis and often gross hemorrhage. The mucosal irritations may be of sufficient degree to be confused with early changes of ulcerative colitis. This confusion is especially apparent in the patient who has a history of diarrhea with intermittent bleeding. Such a patient should return for reexamination in 7 to 10 days, and the bowel should be prepared on the next occasion with saline enemas.

Oral preparations are mentioned only to condemn them. Nothing is more frustrating and time consuming to the physician than attempting to keep a field clear of the constant seepage that is usually caused by the use of the small bowel drugs. The majority of these patients have to be rescheduled for examination.

## **Types of Enemas**

The enema dates back to antiquity. Hughes<sup>1</sup> reported that an individual would sit in a running stream, insert a sawed-off tip of a cow's horn into the rectum, then face downstream and allow the water to en-

ter under pressure. Certain African tribes practice the insufflation method by blowing water into the rectum through a hollow reed. Most enemas are instilled by the gravity or free-flow method.

Several commercially prepared enemas are now available. These are hypertonic solutions, which can be delivered from a plastic container into the rectum by substituting a short plastic tube for the container stopper. At the present time, my colleagues and I are in the process of assessing the value of several of these preparations.

Often excess mucus that is thick and frequently tenacious is present. Hospitalized patients often have to be reexamined. Ambulatory patients who have had their daily bowel movements seem to respond better. Gripping or lower abdominal cramps often are noted for several days after the use of an enema.

It seems, as with other facets of our atomic age, that the skill of enema administration is becoming a lost art.

In hospitals, enema administration is often relegated to a nurse's aide by a recent graduate whose experience in this field is of limited tenure.

I believe that this basic nursing art no longer receives the proper emphasis in the training of nursing personnel. It becomes apparent that we, as physicians, must provide a little gentle guidance. I would like to outline the instructions for enema administration that I present to my patients and student nurses.

### Enema Administration

Abrasions of the anal canal and often of the rectal wall have resulted from a misdirected enema tip or from an enema tip that has not been lubricated adequately.

The receptacle that contains the warmed fluid should be placed at a level above the hips to allow free but not forcible flow of the fluid from the tip of the tube (usually 1 to 2 inches).

The patient is instructed to assume a hori-

zontal position either on the floor or on a bed. Since water does not flow upward, sitting on the stool clears only the rectum of fecal material. A pint of warm fluid introduced into the lower portion of the bowel usually causes adequate evacuation if it is retained until definite lower abdominal cramping is observed. The patient should attempt to hold the fluid until he is dubious whether he will be able to reach the water closet in time to expel the contents of the bowel. Under these circumstances two or three pints of water usually produce a clean bowel and a nonirritated mucosa.

Clear enema returns are often mentioned as important, and patients labor to the point of near exhaustion attempting to pass the water in its original clear quality. The term "clear returns" suggests returns that are clear of fecal particles but which are often discolored.

There are definite disadvantages to the use of an enema. Often a portion of the enema fluid may be retained causing discomfort. Many patients, of course, dislike the procedure. With increasing hospital costs, economy in the use of personnel's time is becoming of paramount interest; in enema administration, often as much as an hour is needed in cleansing the bowel.

In an attempt to overcome some of these disadvantages, I began to seek another method of bowel preparation for proctosigmoidoscopy. A rectal suppository was considered to be ideal because of the simplicity in its use.

Certain criteria must be met before a change can be recommended. The substance under investigation obviously must cleanse the lower part of the bowel as well as an enema does. The factor of mucosal irritation must be considered in addition to possible after or side effects.

Previous investigators<sup>2,3</sup> have cited the use of a carbon dioxide-producing, rectal suppository in evacuation of the lower portion of the bowel and in functional constipation but not in the preparation of the bowel for mucosal evaluation.



## Present Study

*Selection of Patients* — In order to evaluate this type of suppository,\* patients from the gastrointestinal sections of the Mayo Clinic were selected since the degree of bowel evacuation would have more meaning in such patients than in others whose primary complaints were referable to other body systems. All other patients who were examined by proctosigmoidoscopy during the period of investigation received enemas to prepare the lower part of the bowel.

In this preliminary report of four months' investigation, the carbon dioxide-forming suppository was utilized in 197 instances in 189 patients, and enemas were given in 508 instances to 461 patients. In both groups, the population of males and females was approximately equal. Ages of the patients examined varied from 15 to 93 years.

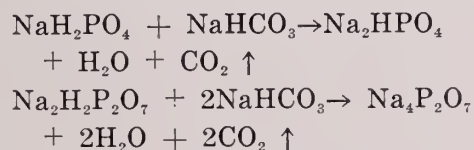
Although a comparative study of the efficacy of the suppository and the enema bowel preparation is the basis of this investigation, only the detailed facts of the former will be undertaken. Only those factors of the enema preparation that are considered pertinent in this comparison will be presented in this preliminary report.

*Materials and Methods* — The chemical composition of the suppository is as follows:<sup>1</sup>

Sodium acid phosphate ( $\text{NaH}_2\text{PO}_4$ )  
Sodium acid pyrophosphate ( $\text{Na}_2\text{H}_2\text{P}_2\text{O}_7$ )  
Sodium bicarbonate  
Polyethylene glycols (blended)

The base of polyethylene glycols<sup>3</sup> is a blend of several glycols to produce the proper consistency for insertion into the rectum and to make the melting point of the suppository somewhat above body temperature.

When the suppository is moistened with tap water and inserted into the rectum, carbon dioxide is liberated by the following chemical reaction according to Barowsky.<sup>2</sup>



\*Vacuetts®, a product of Dorsey Laboratories, Lincoln, Nebr.

He further stated that, theoretically, 330 ml of carbon dioxide can be liberated from one suppository weighing 6.7 gm, but that, in practice, the average amount released in water is only 230 ml. The difference exists primarily because some carbon dioxide is dissolved in water and because the reaction fails to go to completion under the conditions of clinical usage.

The suppository was first moistened with tap water and then inserted into the rectum. A lubricant jelly was not utilized since its presence as a film on the suppository would impede the liberation and thus decrease the amount of carbon dioxide formed. The patients were instructed to retain the suppository for 15 to 20 minutes or until a definite urge to defecate was produced.

The indications for examination in the suppository group were varied: 54 were examined for bleeding (bright blood or melena); 45 had noted a change in the bowel habits; 24 were experiencing abdominal pain; 17 had ulcerative colitis; seven had regional enteritis; two had ileocolitis; seven were suspected of having diverticulitis; 14 either had or have had cancer of the bowel; seven had adenomatous polyps, and 13 had anorectal complaints. The remainder constituted a miscellaneous group whose complaints varied from bowel obstruction to irritable bowel.

*Results* — Somewhat arbitrary criteria were used to categorize the results in the study. Preparation was considered to be excellent if little or no suction was needed during the conduct of the examination. Adequate examination was present when the particles of stool or liquid feces were such as to necessitate almost constant use of the suction, but which in turn produced a mucosa that could be adequately visualized so that the examination could be completed. Poor preparation was present when food residues or particles of fecal material were of such quantity or quality that their removal could not be effected.

The difference between the effects of the two types of bowel preparation was not significant (table). Excellent results were noted in 159 (80.7 per cent) of the 197 ex-

aminations of the suppository-prepared bowel, and in 393 (77.4 per cent) of the 508 enema-prepared bowels. The evaluation of the mucosa was considered adequate in 26 (13.2 per cent) suppository-prepared patients and in 68 (13.4 per cent) patients who received enemas. Poor preparation was present in 12 (6.1 per cent) prepared by the use of the suppository and in 47 (9.2 per cent) of those patients who received enemas.

Table 1

PREPARATION OF BOWEL FOR PROCTO-SIGMOIDOSCOPY: SUPPOSITORY AND ENEMA PREPARATION

| Result    | Suppository |          | Enema  |          |
|-----------|-------------|----------|--------|----------|
|           | Number      | Per Cent | Number | Per Cent |
| Excellent | 159         | 80.7     | 393    | 77.4     |
| Adequate  | 26          | 13.2     | 68     | 13.4     |
| Total     | 185         | 93.9     | 461    | 90.8     |
| Poor      | 12          | 6.1      | 47     | 9.2      |
| Total     | 197         | 100.0    | 508    | 100.0    |

Proctosigmoidoscopic examination could be adequately carried to completion in 93.9 per cent of the instances when the suppository was utilized and in 90.8 per cent when enema preparation was carried out.

Two patients in each of the series demonstrated mucosal irritation that was of sufficient degree to have them reexamined at a later date. Three of these had normal mucosa at the re-examination. The fourth patient was dismissed, but perusal of his record failed to reveal evidence of continued difficulty.

Eighty-seven patients in the suppository group were interrogated regarding their response to the urge to defecate. Forty-four felt a normal urge with only one of this group classed as being poorly prepared. Twenty-seven considered that their response to the suppository was less than normally experienced, but in none of this group was the proctosigmoidoscopic examination deferred because of an inadequately prepared bowel. Fourteen patients stated that they failed to develop any urge to defecate, and

four of these were poorly prepared. It is impossible to compare enema preparation in this regard since the mode of action is of different motivation.

Since Blumberg<sup>3</sup> mentioned in his report that 2.2 per cent of his group experienced a burning sensation that he believed was probably due to a sudden stretch reflex resulting from the expanding carbon dioxide gas, 83 patients of the present series were questioned regarding this sensation. Six noted a slight burning sensation when the suppository was inserted; one stated that the burning was "terrific," and a second patient felt a constant urge to defecate. It would seem from these findings that the burning, being a somatic sensation, was caused by minute abrasions of the anal canal, which were in turn caused by the insertion of the improperly moistened suppository rather than a sudden stretch reflex.

### Summary

A preliminary report comparing the efficacy of a carbon dioxide-forming suppository to the standard enema in the preparation of the lower portion of the bowel for proctosigmoidoscopy reveals the following results.

1. No observable difference in the effect of bowel preparation between the two methods was noted. However, it would seem that the suppository method of bowel preparation for proctosigmoidoscopy when compared to enema administration is favorable since the administration is easier, the time of nursing care is decreased, and the patients accept this method better.

2. In addition, two patients in each group demonstrated evidence of chemical proctitis.

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The best medicine nowadays costs no more than the cheapest battleship.



## PANEL DISCUSSION

# Bowel Evacuation

Isidore Cohn, Jr., MD, Presiding

From the discussion of some of the physiologic, pharmacologic, and anatomic problems concerned with constipation, we have seen that constipation affects just about every branch of medicine, including, as one of the speakers has brought out, even psychiatry. It is obvious that this is a problem which involves office practice as well as hospital practice. It is also obvious from the tremendous quantities of the various types of laxatives used that constipation is a problem which very much influences the American Public and I am quite sure the public in other countries as well.

Are there some specific questions from the audience?

J. B. Christensen, MD (Audience)

I would comment that in private practice it is not always practical to insist on preparation of a bowel for proctoscopy and sigmoidoscopy. Many times people have to come hundreds of miles for such examinations and they must start early in the morning. You can do a very satisfactory proctoscopic examination without preliminary cleansing of the bowel. Indeed, you may find a small amount of blood and mucus which often-times is a valuable clue to a polyp just around the corner in the sigmoid. When this is seen and it is not due to trauma, the bowel should be examined at a later date, prepared or not prepared. If the trace of blood or mucus is seen again, the radiologist is called in to demonstrate a small polyp just beyond the proctoscope. It is not always possible to demonstrate a small lesion, and if the bleeding persists the sigmoid colon should be opened to make the diagnosis and remove the lesion. Doctor John Brush has published papers on this procedure.

I would like to have somebody in this audience substantiate the claim that adults who get mineral oil are going to have lipid pneumonia and probably suffer from a lack

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of vitamins. Is this theory which has been handed down to medical students through the years going to be perpetuated again today? Can someone report on the incidence of lipid pneumonia and lack of vitamins in adults who get mineral oil?

Isidore Cohn, Jr., MD

I think possibly we can ask some of the internists to answer this. I know that on our Thoracic Surgical Service, within the past few years, they have resected a number of adult lungs for lipid pneumonia. How long-standing these had been, I do not know. Doctor Paustian, would you and Doctor Sehnert like to say something about the frequency of lipid pneumonia in adults today?

Frederick F. Paustian, MD

Let me answer one other question first, relative to interference with absorption of fat-soluble vitamins. In a discussion regarding this problem a number of years ago, nothing whatsoever was reported to suggest that mineral oil will prevent absorption of fat-soluble vitamins. However, in Goodman and Gilman, "The Pharmacological Basis of Therapeutics," it is stated that mineral oil is a solvent for fat-soluble vitamins and that, with prolonged use of this emollient, vitamin deficiencies might occur. I have never seen such a clinical situation.

So far as lipid pneumonia is concerned, this depends upon aspiration of the mineral oil into the lungs. If one never aspirates the mineral oil one ingests, in terms of getting it into the lungs, then he does not get lipid pneumonia. However, if there is impairment of the swallowing mechanism, especially in the elderly patient, lipid pneumonia is likely to occur. There are some fairly well documented cases indicating the



circumstances in which, in various types of dysphagia and deglutition disorders, lipoid pneumonia will occur. Certainly if anybody does much in the way of endoscopies, he is aware of a much decreased gag reflex in the aged individual compared to the younger individual. These elderly people do aspirate orally ingested substances without recognizing discomfort. There is a real problem in the clinical use of mineral oil in the aged.

The other situation in which mineral oil is utilized clinically is for lubricating the nares. Here it is actually placed into the nose in terms of a dropper, and then literally is sucked up and aspirated into the tracheal tree and thence into the lungs. This is a major cause of lipoid pneumonia.

**Keith W. Sehnert, MD**

I might state, in answer to Doctor Christensen's question, that if the pediatric patient has a cleft palate, and is somewhat immature or has some other disability, he will gag and actually aspirate the mineral oil, especially if the mother attempts to force it down the child. Certainly the extent of reports of this in the literature convinces me that this is a real problem and not just folklore that is being passed down. I think it does occur.

**Harry C. Shirkey, MD**

I think in the pediatric age group our problem in the United States today is not a lack of vitamins but the one of children being poisoned by vitamin overdosage.

With regard to lipoid pneumonia, I think it was Ivy and Butler who instilled Lipiodol in the nose and then showed it running down into the tracheobronchial tree in normal individuals. We have children regularly who take just a little bit of kerosene. This is not uncommon and we see a lot of trouble from it. Kerosene is a non-viscid material compared to the usual mineral oil. I think it is probably a lot easier than we imagine to get mineral oil into the tracheobronchial tree.

**Isidore Cohn, Jr., MD**

You have brought up another problem that

is worthy of consideration, particularly since two people on the panel have voiced opposing opinions regarding preparation of the bowel prior to sigmoidoscopy. I would agree with you that there are times when it is difficult for some patients to get adequate enemas before they come in for sigmoidoscopy or proctoscopy. However, I wonder if it isn't exactly this kind of patient for whom some of the newer preparations might best be utilized to give fairly quick results in the doctor's office. Doctor Paustian said yesterday that he did not like to prepare his patients before their first sigmoidoscopy. Doctor Culp said he preferred that they be prepared. Would the two of you like to expound on your views a little bit, since some of those present may not have heard your comments yesterday? Doctor Paustian.

**Frederick F. Paustian, MD**

There are probably two different purposes and objectives which determine whether the patient should have a prepared bowel or an unprepared bowel. In inflammatory disease, such as ulcerative colitis or regional enteritis, the doctor is interested in what the rectum holds in terms of its contents and whether or not the content is pathologic. If the bowel is completely evacuated a certain amount of diagnostic information is lost. Doctor Christensen has already described this in terms of a polyp around the corner, which is not visible with a scope but may be causing a small amount of blood to leak in the region of the sigmoid colon. On the other hand, in the bowel in which the doctor suspects polyps within the reach of the sigmoidoscope, the presence of a large amount of mucus or of fecal material may cause him to miss the polyp. In such case, lack of preparation may very well be responsible for his missing the diagnosis. One has to look at this from both points of view and cannot be dogmatic about it either way.

**Clyde E. Culp, MD**

I certainly agree with that. Let me put it another way. They talk about seeing the world through rose-colored glasses. I don't like to see the world through stool-colored

glasses; therefore, I like to have my patients prepared.

**Isidore Cohn, Jr., MD**

Are there comments from other members of the panel on this?

**Harry C. Shirkey, MD**

We define proctoscopy in pediatrics as a procedure that we schedule today and do tomorrow because we often do not get the patient cleaned out well. In this age group enemas are quite frequently used. I agree with you that the art of giving an enema is being lost, as are many of the arts of medicine, since we have gotten into so-called scientific medicine.

**Isidore Cohn, Jr., MD**

Are there any questions from the audience?

**J. Milton Margolin, MD (Audience)**

I would like to address this question to Doctor Charles Magnuson. In your paper on the geriatric patient you mentioned several aspects which are of interest to me. One is the economics of bowel care in the institutionalized, elderly patient. I am the Medical Director of the Lutheran Old People's Home in Omaha. In this Home we have 112 patients about half of whom require some sort of bowel evacuant every day. In the past we usually gave them an enema which required about 15 minutes to one-half hour of a nurse's time per enema. A year ago we started using the new effervescent suppository supplied by Dorsey Laboratories, and we feel that this has resulted in a great saving of both time and money in our Home. The use of this suppository takes only about one-third as much of a nurse's time as that required to give an enema. Actually, we save the cost of one nurse per day, and in these times when adequate nursing care is at a premium, that becomes quite a consideration. The suppositories are effective and the nursing staff is pleased. The majority of patients state when they are questioned that they prefer these suppositories to an enema.

What comments do you have with respect to a daily bowel schedule such as we have adopted?

**Charles Magnuson, MD**

In the type of practice I have, I am concerned primarily with a male population in the older age group. We do a lot of diagnostic work. For one thing, our patients are sedentary, while confined in the hospital, and they may undergo a number of gastrointestinal X rays; for this reason they are subject to fecal impaction. Frequently, we have to give some type of cathartic or enemata. As you mentioned, the economic factor deserves serious consideration. When I started out in Omaha it was routine to give enemas preparatory to proctoscopy and barium enemas. Since our Service was limited to gastrointestinal problems, we had a great number of patients requiring these procedures. We would have perhaps about five or six barium enemas per day. If you multiply that by two or three, a total of fifteen to eighteen enemas would be required to get proper preparation, so you can see that this would tie up the hospital attendants so that they could not operate effectively in other areas.

Another problem in the elderly is that of soiling, and this leads to quite a bit of laundry service expense. I certainly agree with you that we require better procedures to avoid these problems, and I think we are approaching that direction in the use of various suppositories. I am not advocating any particular one: We have had some experience with bisacodyl suppositories and, more recently, with the effervescent suppository.

I have been using the effervescent suppository for proctoscopy on hospital and clinic patients. Many times our patients travel long distances. Some have received improper instructions or have forgotten the instructions given them. When they arrive they are not completely evacuated. In such cases this effervescent suppository given shortly before examination produces gratifying results. On the basis of our limited experience I have been impressed with their



use. As I say, this is only an impression but since I do see a good number of geriatric patients, I can sympathize with your problem.

**J. Milton Margolin, MD (Audience)**

There are a lot of these people whom I call "bowel worshippers" who, if they do not have a bowel movement every day, are unhappy. Many are also senile and cannot remember whether or not they have had one. They will come back and request another enema or something, and of course in the carbon dioxide generating agent we have a non-irritating suppository so that if there is any question the patient can always be given another. The majority of these people are ambulatory, so that the nurse needs only to give them an additional suppository and they can go into the bathroom and then in twenty minutes to one-half hour, come out happy.

**Frederick F. Paustian, MD**

I did not mention this in my report on the pressure required to produce an urge to defecate because we did not have enough cases. It seems that when we moved our tubes up a little higher into the sigmoid colon so that one was there and the other two more distal, we did not get a contraction of the sigmoid colon. It seems as though the distal sigmoid colon is occluded during defecation. I am wondering if, following the use of the suppository, you can get any sort of evacuation of the colon above the middle of the sigmoid colon which is suitable for X-ray examination. I would think not from the very brief number of cases we have studied.

**Isidore Cohn, Jr., MD**

This was a question I was about to ask, because I thought Doctor Magnuson said he felt that it was worthwhile for preparation for barium enemas. We did a study several years ago with one of the micro-enema forms — you know the type that gives an enema in about 5 or 6 cc. We studied these patients for sigmoidoscopy, for surgery, and for barium enemas; and we found that the micro-enema we were using and trying to

evaluate was quite good as a preparation for sigmoidoscopy but grossly unsatisfactory for barium enemas because it did not clean the colon high enough.

**Charles Magnuson, MD**

I would like to comment on the use of bisacodyl. I have used bisacodyl, both tablets and suppository, and found it to be quite effective. In fact, Doctor Mulry, one of our radiologists, and I have been working on this to replace the castor oil and enema preparation and in our experience it seems to show some promise. This is only a pilot observation and we have had no experience with the effervescent suppository in evacuating the proximal colon.

**Keith W. Sehnert, MD**

We have some unpublished reports of experience with the effervescent suppository in radiologic study of about 200 patients. Certainly it does empty the descending colon and rather routinely it emptied at least the distal half of the transverse colon. These were studies of preparation for cholecystograms. I would say our experience was favorable. At least we know that the gas shadows overlying the gall bladder area were removed routinely, but again this is a continuing study. We believe that the neurologic supply would indicate, certainly, that the evacuation response is going back at least to the transverse colon and quite frequently to the hepatic flexure.

**Harry C. Shirkey, MD**

I would like to relate that we use the carbon dioxide suppository primarily as radiologic preparation for pyelographies. The pyelographies are quite important to us as genitourinary anomalies are frequent. We give these children an effervescent drink, such as Pepsi-Cola or Coca-Cola (and some even have a preference in these). The stomach then becomes distended so that we have a nice contrast of air. The hydration resulting from an enema is undesirable since there is less concentration of the contrast dye in the genitourinary system. With the suppository, however, evacuation of the



bowel has been quite satisfactory in getting out both feces and air. Our radiology group has been quite pleased with this new suppository as compared to enemas.

**Frederick F. Paustian, MD**

I wonder, Doctor Culp, if in the use of this preparation, when you have passed your sigmoidoscope the full 25 centimeters, do you find that you have complete evacuation of the sigmoid colon to that level? This would be some 10 centimeters, above the recto-sigmoid junction.

**Clyde E. Culp, MD**

I would say that we had complete evacuation in about 80 per cent.

**Frederick F. Paustian, MD**

The reason I asked was that because of the apparent contraction which takes place at that level, I was wondering, if you were to go the full 25 centimeters with the usual sigmoidoscopic procedure or the usual sigmoidoscope, whether or not you would find evacuation at that level.

**Clyde E. Culp, MD**

I think what you refer to is that so often as you are removing the scope and you get down around 10 to 12 centimeters, around the rectosigmoid junction, very often the patient will say "oh, oh the bowels are going to move." You have to tell him no, that this is a normal sensation. I think that is the place that has the most sensation in this procedure. When you first insert the scope into the rectum, the patient shows no evidence that he feels it or at least he does not imply that he might soil himself; but there are many patients who, if you do not reassure them ahead of time, as you remove the scope, might feel that they might embarrass themselves.

**J. B. Christensen, MD (Audience)**

I thought they got that sensation from the anal margin as the scope was being passed out through the anus.

**Clyde E. Culp, MD**

I thought that, too, but recently I have noticed, in the course of our effervescent suppository-study during which we tried to pinpoint spots of irritation, that this sensation apparently did not occur as the scope was introduced. I suppose by talking to the patient to divert his attention and keep him relaxed, we got around the "bend" and he did not feel any sensation until the instrument was being pulled out. This was also brought home to us recently when our group, cooperating with John Hill, made a study and found this very thing of which you speak in the same area. In fact, we wondered if there really were a true O'Beirne sphincter, but then as the scope was brought out the sphincter did not show itself on the pressure profile. These people seem to feel more of an urge than they actually have as you are putting a tube up around about this area.

**Isidore Cohn, Jr., MD**

Several of you have mentioned the fact that the use of suppositories for producing bowel evacuation is important from an economical standpoint, in terms of nursing help and patient satisfaction. Has anyone studied the time relationship with respect to administration and onset of action of the suppositories as compared to other agents that might have been used? Has anybody from the audience had experience with this?

**Frederick F. Paustian, MD**

I can say only that in a double-blind study which we did using an inert suppository and the active suppository, there was a mean difference of about four minutes which probably is not too significant.

**Clyde E. Culp, MD**

After you do the first few, you begin to wonder yourself. I realize that asking the patients themselves is not always the more scientific way to do it, but after all they are the ones from whom we have to glean our information. Many of them say that it is about eight or nine minutes when they feel on the verge of moving their bowels or

of going to stool. This may well start before then, but so far as actually going to stool is concerned it is eight or nine minutes. When I study a few more patients, I might find that this timing is different.

Isidore Cohn, Jr., MD

Do any of you have any more questions?

William R. Weyhrauch, MD (Audience)

During the last six months I have been doing a series of proctosigmoidoscopic examinations. I found that of the 75 patients examined, 32 needed a bowel evacuant in order to do the examination and 43 did not. This corresponds quite well with the results reported by Weiss and Pitman\* (1/3 to 1/2 of their patients required cleansing).

In my study, I compared four evacuants: Vacuetts®, Dulcolax® suppositories, Fleet® enema and Index® enema. I found that Vacuetts and Dulcolax gave comparable results. The saline enemas generally gave somewhat better results but were not as convenient as the suppositories. Of the evacuants tested, Vacuetts gave the least mucosal reaction.

Glen F. Lau, MD (Audience)

In your discussion period yesterday, you brought out the point that in your experience neostigmine (Prostigmin) had not been helpful in postoperative patients. Doctor Robert Gillespie and I have been very much interested in the subject of postoperative gas. In an effort to treat this frequent problem we have been giving the effervescent suppository mentioned by Doctor Sehnert, every 6 hours around the clock for a period of 24 to 36 hours. This has seemed to aug-

ment peristalsis in the colon. Preliminary results have been very encouraging.

I would like to know a bit more about your experience with postoperative gas; what procedure you usually follow and if you have ever followed a routine similar to ours.

Isidore Cohn, Jr., MD

We have never followed any specific routine for the prevention or treatment of postoperative gas other than the routine use of gastrointestinal intubation prior to all major abdominal surgery. It is my own personal routine to leave a Levin tube in the stomach until there is adequate peristalsis following upper gastrointestinal surgery or to leave the tube in place until there has been a satisfactory bowel movement following any surgery in which a colonic anastomosis is indicated. I have no experience with the routine use of any specific agent to stimulate peristalsis.

Isidore Cohn, Jr., MD

Our time is just about up. It is from conferences of this nature and studies of the basic type which we have heard reported today that we are likely to learn a good deal more about the physiology of bowel function, both normal and abnormal. I think also you will find from a study such as this that some of the findings you least expect will turn out to be dividends. For example, I would doubt that any one of the early stages of the study of the effervescent suppository would have anticipated that this type of bowel evacuant would be important from an economic standpoint in its saving in nursing care of the very young, of those with neurologic deficits, and of those in the geriatric age group.

\*Weiss, A. and Pitman, E. R.: Methods of bowel preparation for sigmoidoscopy. *Amer J Dig Dis* 7:102-111, (February) 1962.

## Coming Meetings

### CRIPPLED CHILDREN'S CLINICS—

February 6 — Scottsbluff, St. Mary's Hospital

February 20 — Grand Island, St. Francis Hospital

March 6 — North Platte, Adams Junior High School Building

March 20 — Ainsworth, Elementary Grade School

THE AMERICAN COLLEGE OF PHYSICIANS — Nebraska Regional Meeting, Omaha, February 6, 1965. Info: Henry J. Lehnhoff, Jr., MD, 720 Doctors Building, Omaha, Nebraska.

AMERICAN COLLEGE OF CARDIOLOGY, 14th Annual Meeting — February 17-21, 1965, Boston, Statler Hilton Hotel.

AMERICAN COLLEGE OF PHYSICIANS REGIONAL MEETING — Including Southern California, Northern California, and Nevada; El Mirado Hotel, Palm Springs, California; February 19-21, 1965. Info: Edwin V. Banta, Jr., MD, 2 West Fern Avenue, Redlands, California.

BOARD OF COUNCILORS — Nebraska State Medical Association; Mid-Winter Meeting, Sunday, February 21, 1965, Fort Kearney Hotel, Kearney.

COLORADO MEDICAL SOCIETY, 30th Annual Session — February 23-26, 1965, Hilton Hotel, Denver. For details, write the society at 1809 East 18th Avenue, Denver 80218.

HOUSE OF DELEGATES — Nebraska State Medical Association; Mid-Winter Meeting, Saturday and Sunday, February 27 and 28, 1965, Fort Kearney Hotel, Kearney.

ELEVENTH ANNUAL JOINT SECTIONAL MEETING, American College of Surgeons and Nurses — Seattle, March 8-11, 1965. For details contact Dr. James H. Spencer, 55 East Erie St., Chicago 60611.

1965 NATIONAL MEDICOLEGAL SYMPOSIUM — Sponsored by the AMA and

the ABA; Dunes Hotel, Las Vegas, March 11-13, 1965. First such meeting jointly sponsored. Registration cards may be obtained by writing Mr. Robert M. Throckmorton, general counsel, AMA, 535 North Dearborn Street, Chicago, Illinois 60610.

17TH ANNUAL TEACHING SEMINAR— At the Jung Hotel, New Orleans, March 13th through 18th, 1965.

AMERICAN COLLEGE OF PHYSICIANS —Golden Anniversary Meeting, Chicago; Conrad Hilton Hotel, March 22-26, 1965.

12TH ANNUAL MEETING OF THE MID-STATES ORTHOPAEDIC SOCIETY — March 25-27, 1965, at the Velda Rose Towers, Hot Springs, Arkansas.

AMERICAN SOCIETY FOR THE STUDY OF STERILITY — Annual Meeting; San Francisco, Jack Tar Hotel; April 2, 3, and 4, 1965. Info: William H. Robertson, 2700 Tenth Avenue South, Birmingham, Alabama 35205.

AMERICAN INDUSTRIAL HEALTH CONFERENCE — April 5-8, 1965; American Hotel, Bal Harbour, Miami Beach, Florida, Industrial Health Conference, 55 East Washington Street, Chicago, Ill. 60602.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS — Interim meeting; Dallas, Texas; April 21-25, 1965.

AMERICAN MEDICAL ASSOCIATION — 2nd Conference on Environmental Health Problems; Chicago, Drake Hotel; April 26-27, 1965.

AEROSPACE MEDICAL ASSOCIATION — 36th Annual Scientific Meeting; April 26-29, 1965; New York Hilton Hotel, New York. Info: William J. Kennard, MD, Aerospace Medical Association, Washington National Airport, Washington, D.C. 20001.

THE 14TH HAHNEMANN SYMPOSIUM titled "Mechanisms and Therapy of Cardiac Arrhythmias" will be held at the Sheraton Hotel, Philadelphia, April 26-29, 1965. Contact Leonard Dreifus, MD,



Program Director, Hahnemann Medical College and Hospital, 230 North Broad Street, Philadelphia 19102.

**AMERICAN ACADEMY OF PEDIATRICS** — Spring Session; April 26 - 29, 1965; Americana Hotel, Bal Harbour, Florida. Info: American Academy of Pediatrics, 1801 Hinman Avenue, Evanston, Illinois 60204.

**PUBLIC HEALTH AND MEDICAL, CHEMICAL AND BIOLOGICAL DEFENSE COURSE** — To be given at the U. S. Army Chemical School at Fort McClellan, Alabama, on April 26-30, 1965.

**NINTH POSTGRADUATE COURSE IN TRAUMA** — Sponsored by Chicago Committee on Trauma, ACS; April 28, 29, 30, 1965; John B. Murphy Memorial Auditorium, 50 East Erie Street, Chicago 60611.

**METABOLIC DEFECTS** — The Fifth Annual Postgraduate Seminar of Childrens Memorial Hospital, Omaha, will be held on Friday, May 21, 1965. Guest speakers will be Victor H. Averbach, PhD, and Angelo M. Di George, MD. Further information can be obtained by writing to Carol R. Angle, MD, Childrens Memorial Hospital, Omaha, Nebraska 68105.

**THE ANNUAL MEETING OF THE AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION** — Will be held on August 22-27, 1965, at the Sheraton Hotel, in Philadelphia.

**FIRST NATIONAL CONFERENCE ON AREAWIDE HEALTH FACILITIES PLANNING, AMA** — Americana Hotel, Bal Harbour, Florida, November 28-29, 1964.

**Future Meetings of the American College of Surgeons—**

**PHILADELPHIA, PENNSYLVANIA**, February 15 - 17. Sectional Meeting. Dr. George P. Rosemond, Local Chairman. Bellevue-Stratford Hotel.

**SEATTLE, WASHINGTON**, March 8 - 11. Annual 4-Day Sectional Meeting for Doc-

tors and Graduate Nurses. Olympic Hotel and nearby hotels. Dr. Edward B. Speir, Local Chairman for surgeons' program. Elizabeth Giblin, RN, Local Chairman for nurses' program.

**ANNUAL CLINICAL CONGRESS**, October 18-22, 1965, Atlantic City, New Jersey.

— 1966 —

**BAL HARBOUR, FLORIDA**, January 13-15. Sectional Meeting. Americana Hotel.

**HOUSTON, TEXAS**, January 31 - February 2. Sectional Meeting. Sheraton-Lincoln Hotel.

**CLEVELAND, OHIO**, March 14-17. Annual 4-Day Sectional Meeting for Doctors and Graduate Nurses. Sheraton-Cleveland and nearby hotels.

**ANNUAL CLINICAL CONGRESS**, October 10-14, 1966. San Francisco, California.

For any advance information address: Secretary, American College of Surgeons, 55 East Erie Street, Chicago, Illinois 60611.

**ANIMAL CARE PANEL** — 16th Annual Meeting; Sheraton Hotel, Philadelphia; November 15-19, 1965. Contact Mr. Joseph J. Garvey, Executive Secretary, 4 East Clinton Street, Joliet, Illinois 60434.

## **AMA DELEGATE'S REPORT to the NEBRASKA STATE MEDICAL ASSOCIATION**

The Eighteenth Clinical Convention of the American Medical Association was held at Miami Beach, Florida, November 29 to December 2, 1964. Your officers, delegates and members of our State Association who were in attendance were unanimous in their belief that the various meetings were conducted in a high degree of efficiency, resulting in effectual policy-making and in scientific programs which were most noteworthy in the portrayal of advances made in the overall field of medicine. The scientific

and technical exhibits as well as motion picture programs were highly acclaimed.

Final registration at the Convention totaled 9356 and of this number 4118 were physicians.

The House of Delegates devoted the entire morning of November 30th in session; the afternoon was set aside for the purpose of permitting the delegates and officers as well as any member of the AMA who so desired to attend the meetings of the respective reference committees. The House reconvened on December 2nd.

The highlight in the agenda for the House of Delegates was the address of Donovan F. Ward, MD, of Dubuque, Iowa, President of the AMA. Doctor Ward was elected at the annual convention in June, 1964, and would not, under ordinary conditions, take office until the annual convention of 1965. How-

ever because of the sudden and untimely death, on September 3rd, of President Norman A. Welch, MD, while attending the annual meeting of the Wyoming State Medical Society, Doctor Ward immediately assumed the office of President. He will retire during the 1965 annual convention.

It would be impossible in this report to include in its entirety Doctor Ward's brilliant presidential address, but it might be well to quote the following:

"I call upon all American physicians again to prove that medicine is an institution of service to all mankind; that we are dedicated to providing the best possible medical care to all our patients; that we cannot fulfill this aim if progress and practice in medical care are to be stifled by excesses of government control.

"I urge each of you, and your colleagues



Dr. Donovan F. Ward (c), AMA president of Dubuque, showed his appreciation as the hundreds of physicians and their guests at the AMA House of Delegates dinner greeted him in song with birthday wishes. Joining in were Mrs. Ward and Dr. Homer Pearson, AMA trustee, Miami, Fla., and master of ceremonies at the dinner.



in the state and county societies, to join in this renewed effort. The history of the long and bruising struggle we have been through over this question has taught us that the more people know about direct federal intervention in the field of health care, the less they will support it.

"We have no choice except to stand firm in our efforts to prevent the standards of health care in this country from being undermined by a radical departure from the unique American way which has accomplished so much for mankind.

"If we have been right in the past — and that is our unshakeable belief — then we are right today. And we shall be right tomorrow . . . We do not, by profession, compromise in matters of life and death. Nor can we compromise with honor and duty . . . No more can be asked of us as citizens. No less should be offered by us in guarding our heritage of freedom."

Doctor Ward was given a prolonged standing ovation following his address.

To fulfill some of the ideas expressed by Doctor Ward, the House called for an expanded educational program to be conducted during the next few months, and adopted a resolution which urged "component associations to stimulate the state and local governments to seek the fullest possible implementation of existing mechanisms, including the voluntary health insurance principle, to the end that everyone in need, regardless of age, is assured that necessary health care will be available." Considerable time and discussion were given to furthering and expanding the Kerr-Mills programs, taking into account the differences to be found in the implementation of the law in the respective states.

This year contributions to the AMA-ERF reached a new height. Seven state medical associations contributed \$493,459.04; Merck Sharp and Dohme added their fourth \$100,000 contribution and announced an additional pledge of \$100,000 during 1965. Wyoming's contribution of \$5,000 was earmarked for the Doctor Norman A. Welch Memorial Fund, which is a part of the student loan

program. During the first eleven months of 1964, \$1,216,848 was contributed by state societies, individual physicians, women's auxiliaries and other medically related organizations. One of every six students, interns and residents in the United States now secures financial assistance from the AMA-ERF loan fund. This fund has guaranteed a total of more than 25 million dollars and, during the past year, has guaranteed approximately seven hundred thousand dollars each month in loans.

The House of Delegates approved the following and amended the By-Laws accordingly:

1. Change the title of "Annual Meeting" to "Annual Convention."

2. Permit the inauguration of the President to take place at a time other than Tuesday evening. This ceremony will be held on Sunday, June 20, during the 1965 convention.

3. Present the Distinguished Service Award at the Scientific Awards Dinner rather than during the meeting of the House of Delegates.

4. Fill vacancies on standing committees of the House of Delegates and in the offices of Vice President, Speaker, Vice Speaker and Trustees by appointment by the Board of Trustees until an election is held to fill these offices.

5. Install the Vice President rather than the President-Elect to the office of President upon the death, resignation or removal from office of the President.

6. Create a Section on Allergy.

Other positive actions by the House of Delegates:

1. AMA dues shall not be increased.

2. Adopted a simplified health-insurance claim-form.

3. Accepted the recommendation of the Board of Trustees for establishment of a tele-typewriter communications service between the AMA and state medical societies' headquarters. This will provide automatic



and uninterrupted communication between AMA headquarters and all participating state societies, and between individual state societies, the latter to be direct without involving the facilities of AMA. This plan is optional with state medical societies. Installation and rental costs, both at AMA headquarters and the headquarters of each participating component society, will be paid by the AMA. The only cost to the state societies will be that for transmitting messages, this to be paid by the organization originating the message. A tele-typewriter exchange rate for a 900-word message between headquarters of the Nebraska State Medical Association and AMA headquarters would be approximately \$2.80. It is believed that this communication system will be operative no later than July 1965.

4. Cooperate with the United States Public Health Service in eradicating the *Aedes aegypti* mosquito from the American hemisphere.

5. Reaffirmed its approval and support of the National Council for Accreditation of Nursing Homes.

6. Approved 33 recommendations of the Commission on the Cost of Medical Care, the Commission noting "that the recommendations which were approved will help promote the wisest possible use of the medical care dollar and aid in the development of more meaningful data on the cost of medical care."

7. Recognized the need to take a more positive position on population control — a medical, social and economic problem — through cooperation with voluntary organizations in the field of human reproduction, these organizations to have adequate medical direction.

8. Urged strong support of the Woman's Auxiliary of the AMA and asks the state and county medical societies to give serious consideration to the idea of joint husband-wife membership. The Woman's Auxiliary received many compliments for the wonderful work that they are doing.

It seems to your delegate that these were some of the more important of many gen-

eral actions taken by the House of Delegates.

Thirty-eight resolutions were introduced, of which number, five were withdrawn. The following actions by the House warrant recognition in this report:

Resolution Number One, presented by the Nebraska State Medical Association relative to the untimely death of President Norman A. Welch, MD, was unanimously adopted by standing vote of the House as a committee of the whole.

Resolution urging all state and component medical associations to approve, where feasible, the inclusion of a voluntary non-deductible contribution to independent political action committees (AMPAC and state political action committees) on the societies' annual dues billing statement was approved.

Loan funds for student nurses — the reference committee recommended that this resolution be referred to the Board of Trustees and that the overall role of the medical profession in encouraging careers in nursing be thoroughly reexamined.

A resolution regarding racial discrimination in medical society membership and hospital staff appointments reaffirmed a clear-cut policy already adopted by the AMA opposing racial discrimination.

Two resolutions having to do with correct patient billing for laboratory services were referred to the Judicial Council for further consideration and implementation.

A resolution titled "General Practitioners to Meet the Medical Needs of the American Public" was approved as amended by the reference committee on Medical Education and Hospitals, which now reads as follows:

"Resolved, That the House of Delegates again emphasizes its continuing awareness of the demand for action on satisfying the need for increasing numbers of family physicians. It is the wish of the House of Delegates that the Committee on Education for Family Practice be charged fully by the Council on Medical Education: to review all aspects of the problem of education for fam-

ily practice; to cooperate with all existing commissions and committees of this Association and other appropriate organizations and individuals properly concerned with the same problem; to meet as frequently as indicated; to have available staff assistance adequate to its needs; and to provide through the Council on Medical Education a report of progress to the House of Delegates at the Annual Meeting in June, 1965, with recommendations for specific actions."

Due to the death of President Norman A. Welch, MD, and the elevation of Donovan F. Ward, MD, to the office of the Presidency, it was necessary to name a President-Elect. James Z. Appel, MD, of Lancaster, Pennsylvania, a family physician, was elected to this office. Your delegates gave active support to his election. Doctor Appel for many years has given of himself beyond the call of duty toward the accomplishments made in advancing positive policies influencing Medicine at the local, state and national levels. He was currently serving as Vice Chairman of the Board of Trustees.

Joseph B. Copeland, MD, Austin, Texas, was elected to the Board of Trustees to fill the vacancy created by the resignation of Doctor Appel from the Board after being chosen President-Elect. Wesley W. Hall, MD, Reno, Nevada, was elected Vice Chairman of the Board of Trustees, and Homer L. Pearson, MD, Miami, Florida, was made a member of the executive committee of the Board.

Future meeting sites for the AMA conventions are as follows:

Annual Convention—

1965—New York

1966—Chicago

1967—Atlantic City

1968—San Francisco

Clinical Convention—

1965—Philadelphia

1966—Las Vegas

1967—Houston, Texas

## RECOMMENDATIONS

1. That all members of the Nebraska State Medical Association read Doctor

Ward's complete address, which will be found in JAMA under date of December 14, 1964, Volume 190, Number 11, Pages 982 to 985.

2. That the Nebraska State Medical Association lend all efforts in implementing the Kerr-Mills Law and voluntary health insurance principles.

3. That dues paid by members of the Association include individual contributions which could be given as a whole from Nebraska physicians to the AMA-ERF.

4. That the Nebraska State Medical Association review and revise the By-Laws in regard to vacancies in offices to coincide with the revised By-Laws of the American Medical Association covering this subject.

5. That the tele-typewriter communication service between headquarters of the Nebraska State Medical Association, the American Medical Association and other component societies be established.

6. That a husband-wife membership be instituted by the Nebraska State Medical Association.

7. That consideration be given to include in membership dues voluntary contributions to independent political action committees.

8. That the membership take cognizance of future conventions of the AMA as contained in this report, with the hope that as many as possible will attend one or all of these conventions. Members should not forget that all are eligible to attend meetings of the House of Delegates and those of the reference committees.

Respectfully submitted,

J. D. McCarthy, MD

This report terminates my office as one of the two delegates from the Nebraska State Medical Association to the American Medical Association. Through the years as delegate I have held many offices within the framework of the AMA and have been associated with the most dedicated gentlemen — officers, policy-making bodies and administrative staff of our parent organ-



ization. I have the firm belief, because of these experiences, that AMA has been and is performing a splendid service to the overall practice of Medicine as well as to the 198,239 members which it serves.

May I extend to the House of Delegates and members of the Nebraska State Medical Association my sincere appreciation for their confidence in my abilities to fulfill the exacting duties of this high office. Most important to me have been the warm friendship, helpful counsel and cooperation from my past and immediate confreres in the Nebraska State Medical Association, to-wit: Doctors Roy Fouts, Karl Hohlen, Earl Leininger, Harold Morgan, William Kenner, George Covey, Arthur Offerman and Messrs. Merrill Smith and Ken Neff.

I trust that my successor as Nebraska delegate to AMA, J. R. Schenken, MD, will receive the full support of officers and members of the Nebraska State Medical Association and that the splendid work of Earl Leininger, MD, as delegate to the AMA will retain him in this office indefinitely.

#### The Omaha Ostomy Association—

There is an organization called the "Omaha Ostomy Association," associated with the American Cancer Society and with the United Ostomy Association. It is a mutual aid organization for ileostomy, colostomy, and other "ostomy" patients. It publishes the *Ostomy Digest*. It seems that those who have to put up with an ostomy derive mutual support by associating with other victims and with doctors.

While the organization is not primarily medical, it has a "Medical Board" consisting of five physicians with whom we all are acquainted. One member of this board, Doctor Merle M. Musselman, Chairman of the Department of Surgery at the University of Nebraska College of Medicine, who was a special guest at a recent meeting of the organization, poses some questions or ideas. He surmises that this useful and popular organization is not well known throughout the state, and we suspect he is correct in this surmise. The following are two items he places before us:

—Would it be appropriate to include the dates of the meetings in our *Journal*? (Apparently the privilege of attending is not limited to those living in Omaha).

—Perhaps the members would consider changing the name to the Nebraska Ostomy Association.

We are sure Dr. Musselman would be glad to hear from outstaters — patients or doctors. Certainly the *Journal* would be happy to carry the meeting dates providing the information is useful outside the Omaha area.

## Medicare in Operation

### Medicare Permits—

Permits or Nonavailability Statements are a *DD Form 1251*, issued to a Medicare dependent, by an authority appointed locally at the sponsor's Duty Station or Unit Headquarters. The issuance of this statement means that the medical care requested is not available at a Uniformed Services facility in the area, and entitles the dependent to medical care from civilian sources.

The following are examples where this permit is required and not required.

1. The Nonavailability Statement *is* required—

In all cases where the sponsor and the dependent are residing together.. A dependent residing in the immediate vicinity of the sponsor's Home Port or Duty Station while the sponsor is temporarily away at sea, school, et cetera, is considered to be residing with the sponsor.

2. The Nonavailability Statement *is not* required—

- a. when the dependent and the sponsor are residing apart,
- b. when the dependent is on a trip away from their Home Base,
- c. when the medical care received is a bona fide emergency.

A physician participating in the Medicare Program should keep in mind that pos-



session of this permit does not necessarily insure that all services rendered to the dependent will qualify for Medicare benefits.

### THE MONTH IN WASHINGTON

President Johnson has asked Congress to approve a far-reaching program of diagnosis, treatment and stepped-up research on heart disease, cancer, stroke, and "other major diseases."

In a health message to Congress, the president also urged speedy passage of a social security health plan for aged persons.

The outline of his wide-ranging program was the president's first message on legislation sent to the new Congress. He sent it to Capitol Hill on the fifth day of the new session.

Johnson requested in addition to "Medicare:"

—An increase in federal funds for maternal and child health and crippled children's services and broadening of public assistance programs so federal money could be used to pay medical and dental costs for children of needy families.

—Approval of a five-year program of grants to help start community mental health centers to offer comprehensive services.

—A step-up in the program to rehabilitate disabled persons so 145,000 could be restored to useful work each year.

—Establishment under a five-year program of multi-purpose regional medical complexes for diagnosis and treatment of heart disease, cancer, stroke and other major diseases. This proposal envisions a network of 32 centers coordinating efforts of medical schools, hospitals and community facilities costing an estimated \$1.2 billion.

—Federal funds to improve services for the mentally retarded, increase hospital modernization and start a new program of loans and guarantees for loans to help voluntary associations build group medical practice centers.

—New legislation to help medical and

dental schools cover basic operating costs with federal funds.

—Federal scholarships for medical and dental students.

—Extension for five years after mid-1966 of federal health research programs with a greater emphasis on specialized research of a national or regional nature.

—Laws to bring the production and distribution of so-called "goof-balls" pills — barbiturates, amphetamines and other psychotoxic drugs — under tighter control and legislation to require adequate labelling of hazardous substances and safety regulation of cosmetics and therapeutic devices by the Food and Drug Administration.

Prior to the health message, Sen. Clinton P. Anderson (D., N.M.) and Rep. Cecil R. King D., Calif.) already had introduced medicare legislature to carry out the President's program. It was S-1 in the Senate and HR-1 in the House. It was a modified version of the King-Anderson bill which died in a joint House-Senate conference committee last year after the Senate had voted 49-44 to add it to a House measure increasing social security cash benefits.

The new King-Anderson bill calls for bringing self-employed physicians under social security coverage. It also would increase social security cash benefits by seven per cent. In a benefit period, all persons 65 years or older would be eligible under the health care plan for 60 days of hospitalization with the patient paying for the first day and 60 days of post-hospital care in a nursing home. Generally, 90 days would have to intervene between benefit periods. Aged persons also would be eligible for up to 240 days a year of home health services, such as a visiting nurse, and certain outpatient diagnostic services with the patient paying a monthly deductible. Nursing home benefits would start January 1, 1967, and the other benefits July 1, 1966.

Social Security taxes would be increased by 0.3% next year, 0.38% in 1967-68, and 0.45% in 1969 and following years on employees and employers for a separate fund

to finance the program. The tax base also would be increased to \$5600.

The program would be administered through social security by the secretary of Health, Education and Welfare. Hospitals could elect to be represented by a private organization, such as Blue Cross, to negotiate their contracts. The secretary would also delegate to such organization the functions of receiving payments from the social security program. Payments would be made to hospitals and other providers of services on a cost basis. The cost of hospital services would be based on semi-private accommodations (2, 3, or 4-bed rooms).

The bill also would authorize creation of an association of private insurance carriers to sell, on a nonprofit basis, approved policies covering health costs not covered under the social security plan. Participating carriers would be exempt from anti-trust laws.

Administration officials said Johnson's health proposals, other than medicare, would cost \$262 million in the year starting next July and more than \$800 million in the following 12 months.

Officials said the entire package, including the five-year program to establish regional medical centers to combat heart disease, cancer and stroke, would cost several billion dollars spread over this decade.

This plan for helping with the medical bills of needy children would be similar to the existing Kerr-Mills program for helping needy aged persons pay medical expenses. Aides said \$100 million would be earmarked for the first year of the new program and \$250 million in the following year.

President Johnson started his four-year term in the White House in excellent health and physically able to withstand the stresses and strains of the office "in outstanding fashion," according to his physician.

Rear Adm. George G. Burkley, White House physician, made the favorable report on the President's health in the form of 35 answers to questions submitted by newsmen.

He said he keeps a close eye on the Presi-

dent daily and gives him a general examination every seven to 10 days.

Burkley said Johnson, who had a kidney stone removed in 1955, cut down on his calcium intake by drinking less milk after a slight recurrence of kidney trouble in 1963. "There has been no kidney trouble since mid-1963," Burkley reported.

Burkley attributed the President's ability to carry on a rigorous routine, despite his 56 years and 1955 coronary thrombosis, to "complete recovery with excellent general physical fitness and ability to relax on short notice."

The doctor reported that Johnson has a daily supervised health routine at the White House "augmented by walking and at times swimming." He added that "a supervised exercise program is done in his bedroom."

Johnson normally retires around midnight, Burkley said, and his normal bedtime is "infrequently" put off because of work. He said Johnson gets seven to eight hours sleep and that he sleeps well. He usually awakens between 7 and 8 a.m., and later takes a daytime nap. He occasionally "does some work" in bed.

Johnson is on "no special diet" and likes a highball before dinner. He has not smoked since his 1955 heart attack. His weight has been between 205 and 210 pounds, but Burkley — like other physicians who have examined Johnson — would like him to keep his weight "in the 200 pound area."

With about 30 of the largest U.S. cities experiencing syphilis epidemics, health authorities are expressing more and more concern about a resurgence in venereal diseases.

Some experts in the field believed 10 years ago that venereal disease would be wiped out by this time through treatment with penicillin and other so-called "wonder drugs."

But it has not worked out that way. Why? Pointing to sharp increases in venereal disease among teen-agers, some say a general decline in the morals of the nation's youth is a major factor. Other reasons given by public health officials include:



—Steadily increasing urbanization of the population — the movement to the big cities, where venereal disease rates have always run highest.

—Increased mobility of the population, such as in migrant labor groups, and the increased use of the airplane and automobile — permitting the diseases to spread much faster.

—False feelings of security against the threat of venereal disease following introduction of the “wonder drugs.” But many people don’t make use of the cure after they have had exposure, especially in the case of syphilis, where early symptoms may pass unnoticed.

Public Health Service venereal disease experts say the upsurge in both syphilis and gonorrhea “is not confined to any race, sex, socio-economic group, or geographic area” but has occurred generally throughout the nation.

## Announcements

### 70th Sioux Valley Medical Association Meeting—

One of the first and oldest postgraduate assemblies will hold its annual meeting in Sioux City, Iowa, on Thursday and Friday, the 18th and 19th of February, 1965. This meeting is under the sponsorship of the University of South Dakota School of Medicine, and comprises members from the adjoining four states. The clinical portion of the program will be held at St. Vincent’s Hospital, Thursday morning. The remainder at Sheraton-Warrior Hotel. The registration fee, \$5.00. Accredited for 11 hours, by AAGP.

#### WEDNESDAY EVENING

February 17, 1965

- 7:00 Hospitality Room, Sheraton Warrior  
Your Host: Physicians and Hospital Supply Company, Minneapolis, Minn.  
Refreshments, movies, music  
Wives expected

#### THURSDAY MORNING

Saint Vincent Hospital

- 8:30 Registration, Auditorium Nurses Home

- 8:55 Greeting, Dr. J. P. Tiedeman, President of Staff  
9:00 “The Ultrastructure of the Kidney,” Earl B. Scott, PhD, Professor of Anatomy; Chairman of Department of Anatomy, University of South Dakota School of Medicine  
9:30 “Recent Concepts of Kidney Function,” Willard O. Read, PhD, Professor of Physiology; Chairman of Department of Physiology and Pharmacology, University of South Dakota School of Medicine  
10:00 Coffee Break and Visit to Cobalt Unit  
10:30 “Clinical Application of Cobalt Therapy,” C. M. Marriott, MD, Sioux City, Iowa; W. S. Thoman, MD, Sioux City, Iowa  
11:00 “Indications and Clinical Uses of Artificial Kidney,” George G. Spellman, MD, Sioux City, Iowa  
“Arterio Venous Shunt for Intermittent Dialysis,” Ahmad Akibari, MD, Sioux City, Iowa  
12:00 Luncheon, St. Vincent Hospital Dining Room

#### THURSDAY AFTERNOON

Sheraton-Warrior Hotel

- 1:00 Registration and Visit Exhibits  
1:30 Movie, “Complete Office Gynecological Examination,” Fredrick J. Hofmeister, MD, Milwaukee  
2:00 “Geriatric Gynecology,” Leon S. McGoogan, MD, Professor of Obstetrics and Gynecology, University of Nebraska College of Medicine  
2:30 “Physical Problems in Adolescence,” Bryan Oberst, MD, Chairman of Department of Pediatrics, Archbishop Bergen Hospital; Assistant Professor of Pediatrics, University of Nebraska  
3:00 Visit Exhibits  
3:30 “Present Day Management of the Menopause,” Leon S. McGoogan, MD  
4:00 “Social and Psychological Problems in Adolescence,” Bryan Oberst, MD

#### EVENING SESSIONS

- 5:30 Social Hour, Sheraton-Warrior Hotel  
Your Host: Mid American Medical Supply Company, Sioux City, Iowa  
7:00 Dinner, Ballroom  
“Medical Quackery,” Mr. Oliver Field, AMA Investigative Division, Chicago, Illinois  
9:00-  
12:00 Dancing, Dean Houlihan Orchestra

#### FRIDAY MORNING

- 8:30 Exhibits Open  
9:00 Movie, “Forty Causes of Abdominal Pain,” Higer Perry Jenkins, Chicago  
9:30 “Halothane and Shock,” Max Sadove, MD, Professor of Anesthesiology; Head of Division of Anesthesiology, University of Illinois, at Medical Center, Chicago



- 10:00 "Hematuria," William Bowles, MD, St. Louis, Missouri
- 10:30 Visit Exhibits
- 11:00 "Modern Clinical Management of Diabetes Mellitus," E. A. Hounz, MD, Professor and Chairman of the Department of Medicine, University of North Dakota School of Medicine
- 12:00 Luncheon, Sheraton-Warrior Hotel  
Discussion: Max Sadove, MD; E. A. Hounz, MD, and William Bowles, MD
- 1:00 Movie, "Medical Genetics I"
- 1:30 "Shock and Its Management," Max Sadove, MD
- 2:00 "Nose and Throat Problems in Relation to General Practice," E.E.N.T. Academy
- 3:30 "Urological Cancer," William Bowles, MD

#### ACP Postgraduate Course Postponed Until Fall—

A postgraduate course sponsored by the American College of Physicians (ACP) and originally scheduled for June 14-18, 1965, has been postponed until November 1-5, 1965.

The course is Course No. 18, "Psychiatry for the Internist." It will be held at the University of Colorado Medical Center, Denver, Colo., with Herbert S. Gaskill, MD, Denver, Colo., as director.

#### Lilly Began Distribution of Live-Virus Measles Vaccine in January—

With the licensing of its attenuated live-virus measles vaccine, Eli Lilly and Company will have both live and killed-virus measles vaccines for distribution in January, 1965.

The company has had the inactivated-virus vaccine for a year. It will start shipping the new live-virus vaccine to wholesalers January 4, with distribution scheduled for January 25.

Measles Virus Vaccine Live, Attenuated, Lilly, is a suspension of freeze-dried attenuated measles (rubeola) virus of the Edmonston strain. The virus is grown in chick-embryo tissue culture maintained in a synthetic medium. To prevent bacterial contamination, neomycin sulfate equivalent to 50 mcg. per ml. is added during processing.

For convenience in administration and protection of vaccine potency, the new freeze-

dried vaccine is supplied with a Hyporet® (disposable syringe, Lilly) containing sterile diluent for reconstitution. Because detergents, preservatives, and antiseptics will inactivate live-virus measles vaccine, *only* the syringe with sterile diluent supplied with the vaccine should be used for reconstitution and administration.

For further important information, contact Eli Lilly and Company.

#### Ten Regional Institutes on Nursing Home Care Planned for 1965—

The Joint Council to Improve Health Care of the Aging has announced a series of 10 Regional Institutes on Nursing Home Care to be held during 1965.

The new series is designed to expand on the format developed during six institutes held this year which stressed the importance of the nursing home as a medical facility and the needs of the long-term patient.

During 1965 the institutes will probe in depth the immediate needs of nursing homes. Attention will be given to developments in accreditation of long-term facilities and for the opportunity to participate in the accreditation program of the National Council for the Accreditation of Nursing Homes.

Atlanta has been selected as the site of the first 1965 institute to be held at the Riviera Motel, Feb. 15-17. Other conferences will be in Minneapolis in April; Seattle in May; Columbus, Ohio in June; Toronto, Canada in July; Denver in August; Boston in September; Philadelphia in October; Dallas in November; Los Angeles in December.

For additional information on the 1965 institutes write: Joint Council to Improve Health Care of the Aging, 29 East Madison Street, Chicago, Illinois, 60602.

#### Nationwide Distribution of Measles Vaccine—

Parke, Davis & Company recently announced plans for the nationwide distribution of measles vaccine.

The vaccine was developed by Philips Roxane, Inc., of St. Joseph, Mo., and Colum-

bus, Ohio, and recently approved by the Federal Government.

Graydon L. Walker, Parke-Davis vice president, U. S. sales and promotion, said distribution of the vaccine would begin immediately to all of the firm's branches and depots in the United States.

The vaccine is the live, attenuated type and is indicated for preventive immunization against naturally occurring nine-day measles, Walker added.

The vaccine, developed after more than six years of laboratory work, has produced no serious side effects during the clinical field trials involving approximately 130,000 children, and these trials proved the effectiveness of the vaccine, with predicted lifelong immunity, in 94 to 97 per cent of those vaccinated.

The suggested dose is a single 0.5 cc. injection subcutaneously or intramuscularly. The coadministration of gamma globulin or Measles Immune Globulin, in a different muscle, is recommended to modify any mild reaction, such as a rash or slight fever, that may result from the vaccine.

Medical authorities have estimated that there are 23 million children in the United States between the ages of nine months and nine years who have not been immunized against measles.

The Measles Virus Vaccine, Live, Attenuated will be supplied in packages of 5 one-dose ampoules of freeze-dried vaccine with one 4.5 cc. vial of diluent.

#### Nebraska Society of Clinical Hypnosis—

The Nebraska Society of Clinical Hypnosis held a meeting at the Pathfinder Hotel, Fremont, Nebraska, on December 6, 1964. A new president was installed, a president-elect elected, and program and public relations committees appointed. The next meeting will take place at the same place, on the second Sunday in March, 1965. All interested MD's and dentists are invited. Dinner reservations may be made in advance by contacting Chas. M. Murphy, MD, chairman of the Public Relations Committee, at 5901 Military Avenue, Omaha, Nebraska 68104.

## Doctors and Medicine in the News

### We See by the Newspapers That:

—Omahans are pioneering in the research against colds. The groundwork for this study began in 1962, expanded somewhat in 1963, and gets in full swing now. Dr. Edwin Lyman explains that all absentee-children in Benson High, Monroe Junior High, and Fontanelle elementary will be checked. If the report indicates an upper respiratory disease, nose and throat washings will be taken. These will be examined in Omaha by or under the direction of Dr. Saliba. These examinations will be begun on the day washings are obtained and three facilities will be implicated — the county health department, the University of Nebraska College of Medicine, and US Public Health Service at Kansas City. (*North Omaha Sun*, Oct. 29, 1964).

—A survey conducted in Omaha and Douglas County among 378 physicians on reporting of venereal diseases shows, according to Dr. Edwin Lyman, director of health in this area, some interesting findings: Fewer than half the cases are reported; syphilis and gonorrhea are on the increase; at the Girls State Training School at Geneva, 65 per cent are infected as compared with five per cent in the Boys State Training School at Kearney; this suggests the girls are infected by older men; one girl as young as 10 years was infected. It is pointed out that control of these diseases depends on reporting, interviewing, and pursuit of all possible sources of infection. (*North Omaha Sun*, Dec. 17, 1964).

—The American Association of Blood Banks has accredited five hospital banks in Nebraska — three in Lincoln (Bryan Memorial, Lincoln General, and St. Elizabeth) and two in Omaha (Childrens Memorial and Omaha Methodist). Seven hundred and seventy-nine are accredited in the United States. (*Lincoln Sunday Journal and Star*).

—Leukemia has been reported as higher in incidence in cities than in rural communities. But, Dr. Thomas Chin, of the Communicable Disease Center in Kansas City, after



a 10-year study in areas of Kansas, agreeing that the rural rate seems to be only about half that in cities believes the difference may be accounted for on the basis of presence of many more aged people in cities. Dr. Robert Rosenloff, Kearney, Nebraska, associate in internal medicine at the University of Nebraska studied and reported on leukemias and lymphomas in six counties in South-Central Nebraska. He found the prevalence of these cancers increasing and evidence that it may be transmissible in closely knitted groups such as families. This, of course brings into focus the possibility of a virus as the cause. One of three dogs owned by a "leukemia-family" was stricken. The question of transmission from chickens and cows to people is suggested by his studies. (*World Herald*, Council Bluffs edition, Dec. 19, 1964).

—Dr. Fay Smith of Imperial has been chosen and his appointment approved by the Board of Regents, to become the first Professor of General Practice ever to be appointed by the University of Nebraska College of Medicine. He will assume his duties July 1, 1965. Dr. Cecil Wittson, dean, said this is in an effort to "beef up" the area of general practice. (*Sunday Journal and Star*, Lincoln, Jan. 10, 1965).

## News and Views

### New Crippled Children Clinics Added—

Dr. George E. Stafford, Medical Director, Nebraska Services for Crippled Children, has announced that "heart clinics" have been expanded from four to seven, and that the Ogalla Clinic has been designated as "cerebral palsy clinic." The crippled children clinics are announced monthly as the first item under "Coming Meetings."

### What About Prostitution?—

The November, 1964 issue (Vol. 39, No. 8) of *Social Health News* has an intriguing first page. One item details an amendment to the newly revised penal law of New York, the other, reviews a book on the history of prostitution.

The book review tells us a fact we all know — prostitution has existed since the beginning of recorded history; also, it is viewed with different colored glasses in different countries and by followers of various religions. To quote the review briefly, "He feels that sexual activities between two consenting adults might be ignored by society so long as they took place in private and offended no one."

Those proposing the amendment to the law in NY are inclined to forgive the prostitute who has something to sell but stick the buyer of her services.

This reminds one, somewhat, of the enthusiasm often shown toward the complete elimination of some of our diseases. The objective is admirable, but it never has been done in any case and methinks it never will.

### More Tax on Insurance Premiums?

The next legislature will be searching for every possible item that may be taxed or upon which the tax may be increased, judging from the amounts of tax monies requested by every activity. There is more than a hint in the Governor's recent statement, as reported in the *Lincoln Journal* that tax on insurance premiums will be amongst the items to be looked over (along with cigarettes, beer, whiskey, and pari-mutual betting).

The "Blues" fought this battle once and may have to do it again. Every dollar tax we pay on premiums is a dollar that cannot be paid to our policy holders; it can't be taken out of our "profits."

### From Blue Cross News (Dec., '64)—

Blue Cross of Northeast Ohio reported payment of a record hospital bill — \$26,-110.31. It is estimated that, at current rates this would equal subscription fees for more than 99 years for the service held by the subscriber. This fee covered the services received by an 81-year-old woman for a two-year stay in the hospital. She was suffering from heart and kidney diseases and cancer.

At the other end of the age spectrum,



nearly \$10,000 was paid for the care of an infant who spent the first 323 days of life in the hospital.

## News From Our Medical Schools

### New Biochemist at Creighton University School of Medicine—

A biochemist who held a two-year post-doctoral fellowship at Johns Hopkins University joined the faculty of the Creighton University School of Medicine, Jan. 1, 1965.

Appointment of Dr. David Gambal as associate professor of biological chemistry was announced by Dr. Richard L. Egan, Dean of the Creighton School of Medicine.

A native of Old Forge, Pa., the new faculty member received his undergraduate degree in biochemistry at Pennsylvania State College, State College, Pa., in 1953. He received his master's and doctorate from Purdue University, Lafayette, Ind., in 1955 and 1957, respectively. He held a post-doctoral fellowship at McCollum Pratt Institute, Johns Hopkins University, Baltimore, Md., from 1957 to 1959.

He joined the faculty of Iowa State University, Ames, Ia., as assistant professor of biochemistry in 1959. He became an associate professor there in 1963 and held that rank at Iowa State until coming to Creighton.

At Creighton Dr. Gambal will conduct research concerning the biochemistry of reproduction. He will utilize two grants from the National Institutes of Health, one for \$41,000 and another for \$23,000.

His articles on lipid metabolism have appeared in national publications.

Dr. Gambal is married and has two children.

## Human Interest Tales

Dr. Hal DeMay was appointed by the Regents as assistant professor of pathology at the Nebraska College of Medicine.

Doctor John M. Thomas was elected presi-

dent of the medical staff of Childrens Memorial Hospital at a December meeting.

Doctor Walter Armbrust, Omaha, was elected president of the medical and dental staff of Doctors Hospital in December.

Doctor John R. Mitchell is the new chairman of the Department of Pediatrics at the Creighton University School of Medicine.

Doctor John R. Hyde, Omaha, has been appointed head of the Department of Anesthesia at Creighton Memorial St. Joseph's Hospital.

Doctor Maurice D. Frazer, Lincoln, was elected secretary-treasurer of the Radiological Society of North America at the groups December meeting.

Doctor John A. Brown, III, Lincoln, was elected president-elect of the Nebraska Obstetrical and Gynecological Society at the December meeting.

Doctor Clarence A. McWhorter was named by the Regents as chairman of the department of pathology at the University of Nebraska College of Medicine.

Doctor Jerry X. Tamisiea, Omaha, was elected to the Board of Directors of the American Society of Clinical Pathologists at a recent Florida meeting.

Doctor Arthur L. Larsen was promoted from assistant instructor to instructor in pathology, at the recent meeting of the Board of Regents of the University.

Doctor John R. Schenken, formerly chairman of the department of pathology and professor of pathology at the Nebraska College of Medicine, remains as professor.

Doctor Walt F. Weaver, Lincoln, and Doctor John C. Sage, Omaha, were designated Associates in the American College of Physicians at the groups December meeting.

Doctor Cecil L. Wittson, Dean of the University of Nebraska College of Medicine, was awarded the West Omaha Sertoma Club's Service to Mankind Award in December.

Doctor Donald J. Buchholz, Omaha, is

the new president of the Omaha-Douglas County Medical Society, and Doctor John W. Gatewood is the new president-elect of the organization.

Doctor Fred Hathaway, Lincoln, and Doctor Louis Gogela, Lincoln, were named president and president-elect respectively, of the Lancaster County Medical Society, at the group's December meeting at Dorsey Laboratories.

## Deaths

**STEENBURG** — Donald B. Steenburg, MD, died in Boston, Massachusetts, on November 29, 1964 at the age of 74. He graduated from the University of Pennsylvania School of Medicine in 1913. Dr. Steenburg served as President for the Nebraska State Medical Association and was active in many other organizations. He spent his entire career in Aurora.

**CLEARY** — James A. Cleary, MD, died in Kearney on November 25, 1964, at the age of 62. He graduated from the Creighton University School of Medicine in 1926. Dr. Cleary was nationally known in the medical profession for his many published papers as well as his accomplishments.

**SCHAEFERS** — Richard H. Schaefer, MD, 49, a former Omahan, died December 6, 1964, at Wapakoneta, Ohio. He graduated from the University of Nebraska College of Medicine in 1939. He served four years in World War II then practiced medicine for two years in Hastings before moving to Wapakoneta.

**THOMPSON** — Irwin L. Thompson, MD, of West Point died December 8, 1964, at the age of 84. A graduate of the University of Nebraska in 1908, Dr. Thompson practiced medicine in West Point for more than 50 years. He was very active in local, county, state and national societies.

## Woman's Auxiliary

**Dawson County—**

The Dawson County Medical Auxiliary met January 4th with the doctors for dinner,

and adjourned later to the home of Mrs. Sam Perry in Gothenburg.

Mrs. Bryant Olsson reported on the Senior Medical Students Day held on October 15th. Mrs. Pyle read current news about Blue Cross and Blue Shield.

There was considerable discussion concerning possible work of the legislative committee under the direction of Mrs. Perry. Currently it is hoped that the doctors and county welfare directors will come to a better understanding so that the funds allocated for Kerr-Mills may be more readily applied for and obtained by patients who need this help. Our hope is to solicit the aid of every doctor in the immediate fight against Medicare now being pushed through Congress.

The date of February 19th has been tentatively set for a luncheon honoring the president and president-elect of the State Auxiliary, with Mrs. Finigan in charge of arrangements.



## Know Your Blue Shield Plan

**Mills Raps Medicare As Being Actuarially Unsound—**

In a recent speech, Rep. Wilbur Mills (D., Ark.), chairman of the House Ways and Means Committee, gave his views on the administration's medicare proposal which he called "one of the more significant legislative subjects of today."

Congressman Mills strongly opposes placing the additional burden of hospital care for all aged persons under the existing Social Security system, for he does not believe in a program whose cost is impossible to actuarially predict. He has supported additions to the Social Security program in the past, but these benefits were in the form of cash payments, and have always been accompanied by sufficient financing to keep the system on a sound actuarial basis. Mills believes, however, that a medicare proposal

can easily have an extremely dangerous effect on the cash benefits portion of the entire Social Security system.

He also believes that we can profit from France's experience in this area. The financial breaking point of France's Social Security system is near, and the chief drain on the French system has not been the retirement benefits, but rather the health insurance system. Mills also reminds those who consider the King-Anderson proposal a "prepayment plan" that the currently retired individuals who would benefit from a medicare program have never paid any taxes as such for hospital insurance benefits. "This," according to the congressman, "is where the prepayment argument when applied to the King-Anderson proposal completely breaks down."

#### Kerr-Mills Now in Effect in 42 States—

Forty-two states now have received full legal authority to provide medical assistance to their needy aged under the federal-state financed Kerr-Mills program according to recent figures released by the United States Department of Health.

Alaska, Arizona, Missouri, Montana, Nevada, Ohio, and Texas are the only states without legal authority to implement Kerr-Mills. Missouri's legislature passed an enabling bill, but the bill was vetoed by the state's governor. Texas' participation requires a constitutional amendment by referendum.

Indiana's program will go into effect on January 1, 1965; Delaware needs federal approval for its program; and Georgia, Mississippi and New Mexico so far have not appropriated the state's share of funds for the program.

#### National Columnist Tells What Medicare Does Not Provide—

Richard Wilson, columnist for the *Des Moines Register-Tribune* syndicate, recently devoted a column telling what the proposed medicare program does not provide to the nation's aged.

Wilson claims that many people do not

seem to realize that the administration's program does not include funds for a doctor's or a surgeon's fees, prescriptions, visits to the doctor's office, dentists's fees, or eyeglasses.

"What is provided," Wilson writes, "is a limited amount of hospital or nursing home care under controlled conditions and on the written certification of a physician." This is not inconsiderable by any means. It would cost \$1.5 billion the first year and the costs would amount rapidly.

"Advocates of health care for the aged financed through Social Security are quite right that it is but a beginning step," he adds. "It surely will not be long before those who are not 65 will ask why they should be taxed to pay the hospital bills of those who are over 65 without themselves receiving any such protection."

#### Medical Cost Expert Says That Medicare Estimates Are Too Low—

The November issue of *Nation's Business* contains an article titled "Federal health estimates—300% wrong," by Dr. Barkley Sanders, an expert in the field of medical costs. Dr. Sanders recently retired after nearly 35 years of government service. His experience in government has included service as chief of the Division of Health and Disability studies in the Office of Commissioner of Social Security, and as a research consultant with the Bureau of Old Age and Survivors Insurance and with the U. S. Public Health Service.

In this five-page analysis of the administration's proposed health care bill, Dr. Sanders claims that if enacted into law, the federally administered plan paid by Social Security taxes would cost at least three times and eventually 10 times more than present estimates.

He points out that the British Health Service's expenditures in 1949 were three times the cost estimates of the program, and this was the very first year after the program was adopted. Dr. Sanders also explains that it is not his purpose to deny the need for a health program for the aged, but



rather that the public should not be deluded as to what an effective program would cost.

Reprints of this article may be obtained for 30 cents a copy, or \$14.00 per 100 post-paid from *Nation's Business*, 1615 H Street N.W. Washington, D.C. 20006. The remittance should be enclosed with the order.

## TUBERCULOSIS ABSTRACTS

### FRONTIERS IN MEASLES PROPHYLAXIS

A vaccine made from an attenuated strain of virus has proved 100 per cent effective in protecting vaccinated children from developing measles in trials conducted to date. Electroencephalographic records of 28 vaccinated children have revealed no abnormalities.

Before embarking on a discussion of results attained to date with various measles vaccines, it seems proper to determine what the extent of morbidity and mortality of this disease may be in our country. During the period from 1950 to 1959, nearly 5.5 million cases of measles were reported, according to the United States Public Health Service. Since reported cases represent only 25 per cent of those actually occurring, we can estimate that there were 22 million cases during this period, or 2 million a year.

While in the United States the mortality reported due to measles averages only about 500 to 600 a year, there are no valid statistics on the incidence of bacterial or of central nervous system complications. However, based on an estimated occurrence of encephalitis of 1 per 1,000 cases of measles, there would have been more than 5,000 instances of encephalitis among the 5 million reported cases, or 22,000 among the 22 million cases believed to have occurred during the same 10-year period.

### LIVE-VIRUS VACCINE

At the present time there are two avenues of investigation in measles prophylaxis. The first involves the use of living agents which have been attenuated and the second involves the use of killed or inactivated viruses that have been grown in monkey-kidney cell cultures. In our laboratory we have been working with attenuated strains. Our hope has been that a single administration of an attenuated agent would be sufficient to provide the same lifelong immunity afforded by a single episode of the natural disease. The results to be reported have been achieved with a preparation of Edmonston virus grown in chick embryo tissue culture.

After a single subcutaneous, intradermal, or intramuscular injection of this material, a modified illness resulted resembling natural measles which has been attenuated by administration of gamma globulin.

### MINIMAL DISABILITY

More than 80 per cent of susceptible children inoculated with attenuated virus vaccine developed

a fever greater than 100 degrees by rectum one week after the injection. This lasted two to three days and reached an average maximum of 102.4° F. Despite this febrile response, there was minimal disability noted by the children or their parents.

In nearly half of the children physicians saw a fleeting rash develop approximately 10 to 11 days after administration of the vaccine. This usually was confined to discrete macular lesions on the neck, behind the ears, or on the cheeks.

Children receiving the attenuated virus do not develop the typical catarrhal symptoms of measles; that is, cough, coryza, and conjunctivitis, although a few had mild conjunctival infection. The children have remained up and about, in many instances have continued at school. The total duration of clinical response to the attenuated virus varies between two to four days, as opposed to the average of more than seven days in the natural disease. To date, no child receiving attenuated vaccines has developed a bacterial complication. The large question remaining, of course, relates to central nervous system complications. More than 10,000 children have received attenuated live-virus vaccination, and there has been no indication of central nervous system involvement. Of course, more cases are needed to establish statistical reliability.

### EFFECTIVENESS OF VACCINE

In the trials conducted to date, children known to be susceptible have been left in intimate contact with their vaccinated colleagues. None of these susceptible children has come down with a secondary response or developed antibodies indicative of this, which is in contrast to children with natural disease. Ninety-six per cent of 284 susceptible children from whom both pre- and post-inoculation serum specimens were available showed a four-fold or greater rise in antibodies to measles virus. The geometric mean titers of both complement-fixing and neutralizing antibodies have remained indistinguishable for more than four years from those of children after natural measles. These results suggest that such antibody levels will persist indefinitely and provide a lifelong equal to that afforded by the natural disease.

The most important question is the prophylactic efficacy of the vaccine. To date, we have had experience with 84 children who at varying intervals ranging from two to 16 months after vaccination have been intimately exposed to the natural disease. There has been 100 per cent protection of the vaccinated children, as contrasted to measles attack rates of 70 to 100 per cent in control, unvaccinated susceptible children.

The question of central nervous system involvement with measles is a prominent one which cannot be answered completely at this time. Electroencephalographic tracings were made after vaccination of 37 children. The records of 28 susceptibles showed no abnormalities whatsoever except for a single instance of a child who had a concurrent streptococcal pharyngitis resulting in a single abnormal tracing consistent with that seen in nonspecific infection. This experience, coupled with our inability to find dissemination of the vaccine virus or microscopic abnormalities when it was inoculated directly into the spinal fluid and cerebral hemispheres of measles-susceptible monkeys, has

led us to be cautiously optimistic that measles encephalitis will not occur after attenuated strains of virus have been administered.

Several groups known to show unusual responses to natural measles infection have been studied. These include patients with tuberculosis, cystic fibrosis, or malnutrition, and adults. No adverse effect of the attenuated virus on the basic disease has been found. This is in marked contrast to the deleterious effects of natural measles on tuberculosis patients.

Experience over the past two and a half years with the use of an attenuated live-virus vaccine has been encouraging, leading us to believe that the widespread use of such a vaccine for the prevention of measles is near at hand.

—Samuel L. Katz, M.D., *New York State Journal of Medicine*, February 1, 1963.

### EMPHYSEMA AND THE AGING LUNG

Study of the morphology, mechanics of breathing, and gas exchange of the lungs of aged people and comparison with the lungs of patients with obstructive emphysema leads to the conclusion that "senile emphysema" is not a disease entity.

To determine whether "senile emphysema" exists as a disease entity, a study was made of the pulmonary alterations associated with aging, and these were compared with the alterations described as "senile emphysema" and those in obstructive emphysema.

As for morphologic differences, the absence of significant airway obstruction in old persons is indicated at autopsy by the fact that their lungs will collapse readily, but the lungs of a patient with obstructive emphysema, where functionally significant airway obstruction is always present, do not collapse.

Furthermore, the pattern of the air spaces has not been found to be altered with age, but the normal pattern is disrupted in obstructive emphysema and lung tissue is destroyed. And there would seem to be no specific age changes in the structure of the lungs or thorax which could serve as the basis for a disease entity called "senile emphysema."

### RESPIRATORY FUNCTION CHANGES

As for alterations in pulmonary function with advancing age, there is an increasingly uneven distribution of both alveolar gas and pulmonary capillary blood flow with advancing age which results in less effective pulmonary function through two contrasting mechanisms.

In some of the alveoli, ventilation is excessive in relation to blood flow and, thus, cannot be utilized; in others, ventilation is deficient in relation to blood flow so that oxygen uptake by the pulmonary capillary blood is not optimal. These changes are slight in normal aged persons and in those with barrel chest deformity. In obstructive emphysema, they are much greater and their effects are more serious.

### MBC AND AGE

For many years the maximum breathing capacity (MBC) has been used to assess the bellows function of the lungs-thorax system. The relation of the MBC to age has been well established in large groups of subjects. It has been shown that the MBC rises rapidly from childhood to reach a peak at about age 20 and then declines in a relatively linear fashion with age. There is a more rapid decline with age in men than in women. The presence of barrel deformity of the chest is not associated with a further decrease in the MBC.

Because of criticism that the MBC test is too strenuous in severely incapacitated patients, several simple and less fatiguing tests have been introduced to provide equivalent information. All are based upon quantitative analysis of some portion of the maximal effort spirogram. One such test measures the flow rate of that portion of air expired from the first 200 ml. to 1,200 ml. of the forced expirogram. This is the maximal expiratory flow rate (MEFR).

The MEFR reaches a peak during the third decade and then declines in a linear fashion with age in men. The years treat women more kindly than the men in respect to the MEFR, there being no significant change with age in women. By comparison, the MEFR is reduced in patients with obstructive emphysema, regardless of age.

### MECHANICS OF BREATHING

Although the changes in mechanics with aging might possibly be accounted for solely by alterations in the thoracic cage, recent studies of the mechanical properties of the lungs alone make this improbable. It has been demonstrated that with increasing age less intrapleural pressure is required to achieve a given degree of lung inflation. Age changes in the thoracic cage or its action are not solely responsible for the altered behavior of the mechanical properties of the respiratory apparatus. Important changes occur in the lungs themselves.

Airway resistance is always significantly elevated in obstructive emphysema and is probably the most important factor contributing to the decreased MBC and MEFR in this disease. Despite the intrinsic changes in the mechanical behavior of the lungs, airway resistance remains normal in the elderly.

Although a significant decrease has been reported with age in the maximal pulmonary diffusing capacity for oxygen in normal subjects, no correlation was found between the breath-holding pulmonary diffusing capacity for carbon monoxide and age. Since the diffusing capacity for oxygen is limited to some extent by pulmonary blood flow and the cardiac output decreases with age, an age correlation for this measurement is not surprising. However, the breath-holding diffusing capacity for carbon monoxide, which is not limited by blood flow, does not show an age correlation.

In patients with obstructive emphysema there is progressive decrease in pulmonary diffusing capacity with increasing severity of the disease, regardless of age.

Physiologic capacities deteriorate with age and the various aspects of lung function are no exception. It is not yet known whether senescence is the result primarily of genetically controlled involution



or of repeated exposure to minor injuries, leaving a permanent mark.

#### EFFECT OF AIR POLLUTANTS

Unlike other viscera, the lungs are continuously exposed to the injurious effects of the sea of polluted air in which so much of the world's population lives. Even though data are scarce, environmental effects on lung function must be differentiated from those of aging as such. Of the various environmental factors under investigation, other than industrial pollutants, cigarette smoking has been the one most complicated in the production of acute and chronic changes in lung function.

Although changes in lung function with age are qualitatively similar to the functional disturbances seen in the early stages of obstructive emphysema, the changes in obstructive emphysema are quantitatively more extreme. More significantly, the physiologic changes in obstructive emphysema are accompanied by dyspnea and the patient's exercise tolerance is limited by pulmonary disability.

Thus, neither a morphologic nor a physiologic basis exists for a disease entity called "senile emphysema."

—Leon Cander, MD; William S. Blumenthal, MD, Hahnemann Medical College, Philadelphia; Geriatrics, June, 1963.

#### NOTICE TO ALL CONTRIBUTORS

The deadline for items to appear in the following issue of the JOURNAL is the 10th of the month. The JOURNAL goes to press on the 12th.

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# THE NEBRASKA STATE MEDICAL JOURNAL

## DR. FAY SMITH

### PROFESSOR OF GENERAL PRACTICE

Those responsible for the appointment of Dr. Fay Smith as Professor of General Practice are to be congratulated. He is a man devoted to this branch of medical practice and successful in his chosen field. He has already demonstrated his ability to teach his subject.

Doctor Fay has a delightful personality and should easily impress on the young student the advantages and desirable features of general practice. He will, doubtless, leave his student with a feeling of the advisability, if not necessity, of being a good citizen first and a good doctor secondly.

Dr. Fay Smith is not only well known in his own state, but rather widely outside its boundaries. His name will carry weight both within and without Nebraska. We wish him pleasure and success in his new venture.

## THE OLD FAMILY DOCTOR

In *The New Physician* (January 1965, page A-13) Dr. Ralph Snyder, president and dean of the New York Medical College, presents an editorial entitled "Doctor-Patient Relationship Reappraised." Dr. Snyder presents obvious facts about present day medical practice and does so in a rather convincing manner.

Dr. Snyder says the patient's attitude has changed because he has a much wider base of knowledge relating to medicine and implies the doctor's attitude has been altered because he possesses a much wider knowledge and more varied list of drugs and methods with which to treat the patient. Therefore, when a patient asks a doctor to come to the home to see him, he is harking back to the day when the doctor's image was his most powerful and efficient remedy; that, therefore, the doctor is offering much more when he resists the request to come to the home and advises the patient to come to the office where he can receive much greater benefit.

One may justifiably take exception to at least two of Dr. Snyder's viewpoints. The first is that the "old family physician" had nothing beyond his "image" to offer the patient. First hand knowledge or even a brief review of the history of medicine adequately supports the view that the "old family doctor" had much more than his "image" to offer the patient. One could support this statement with innumerable examples, but necessity does not demand nor space permit doing this.

The second exception has two prongs, so to speak. Nearly irreparable damage has resulted to some patients by the effort, sometimes combined with delay, of going to the doctor's office. A few moments deliberation will bring to mind an adequate number of such instances in which this is, or could be, true. Secondly, how better can the attending physician inform himself of the extraneous circumstances surrounding the patient — the home, the relatives, the neighborhood, even the reaction of the patient to his surroundings? In a day when "treating the whole man" has become a catch phrase such information would be, in some cases, of inestimable value.

The writer wishes, now, to quote from the *Tufts-New England Medical Center News* (Jan. 1965, p. 2), a portion of a speech by Rt. Reverend Albert J. Shea. He has lived practically in the midst of the growing Center for 35 years and has been both interested in, and busy with the people who came to the Center as patients. When the Center consisted only of a Dispensary, Reverend Shea's first year at this assignment, he says:

"During my first year at St. James in 1922, the Boston Dispensary, a block away from the church, was the only unit . . . providing care for thousands of people. Most of them were immigrant families, newly arrived in Boston. I saw the work the Dispensary did, and will forever remember the compassion, understanding and good medical care they provided to these lonesome people."

One must admit that 35 years ago the doc-



cor had fewer tools with which to treat his patients. He had fewer diagnostic aids — expensive machinery, high powered technical help, transportation, et cetera, et cetera, but one can't admit he had nothing beyond his "image." Like the Great Healer, he saw the multitude of sick and had compassion on them and healed them. With compassion the doctor had drugs (and knew how to use them), and physical therapy, diet, et cetera. He had much in the way of "make-do" and gave the patient the doctor-stimulated will to get well. He knew two or three generations of the family and was familiar with the nonmedical aspects of the sick person; an item not now held in as high esteem as it should be. Again, some familiarity with the history of medicine would turn up many items then available to the "old family doctor" that seem to escape consideration by present day teachers and students — items not included under the title of "miracle drugs."

Many may become so enthralled with the forest that they fail to see the individual trees. In any case, if the "old family doctor" had an "image" that seemed to have such a powerful healing effect, it might be important to conserve it. Adding that image to present day diagnosis and therapy would make an unbeatable combination. But, on the other hand, it is going to be more and more difficult to recreate the image of the old family doctor unless we get out of our offices and hospitals, see the people at home in their accustomed surroundings, and become one of them as often as occasion demands or opportunity affords.

### INADVERTENT OMISSIONS

In previous editorials which listed the pharmaceutical firms now advertising in our JOURNAL, we inadvertently left out two of our oldtime friends: G. D. Searle and Company, and Parke, Davis.

### EDITORIAL NOTES

Present plans to head off "Medicare" have been published to the profession at least four

times — twice in the *JAMA*, in our delegates' report, and by way of *Bulletins* from the office of the Nebraska State Medical Association. Now the plan is before Congress in the CURTIS-HERLONG BILL (H.R. 3727). The name, *Eldercare*, has become attached to it.

H.R. 3727 seems to be logical, effective, as non-wasteful as such a bill could be, and not too divergent from Kerr-Mills. As a matter of fact, a properly conceived and passed Kerr-Mills law, as *Nebraska's is not*, would not differ materially from H.R. 3727. "Medicare," as now before our Congress, is a politician's mud pie — something one can play with but can't eat. Let us hope the Eldercare Bill catches on with those Congressmen who think beyond just spending taxpayers' money.

*Polio* apparently has given way to the Salk and Sabin vaccines. Last year, according to *Health Insurance News*, dropped to a total of 121 reported cases. It is suggested that, without the vaccines, there might have been 35,000 reported cases. Of course, we all know there are several unreported cases for each one reported, but this fact cancels out in the equation; the effect of vaccination has been marvellous. It will be interesting to note how long it takes for the people and the doctors to forget about vaccination, and for the incidence of polio to begin to rise again.

The *Emergency Department* of the hospital should be the "Showcase of the Hospital," according to an editorial in *New York State Journal of Medicine* (Feb. 1, 1965, p. 394). The editorial goes on to a brief exposition of the guidelines laid down by the College of Surgeons. Location, oversight, equipment, while of great importance, are, perhaps, of no greater significance than the following:

"Prompt attention to the patient is the sine qua non of a well-run emergency department. No patient should have to wait more than fifteen minutes to see a physician. Staffing should revolve around this basic requirement . . ."



## TO FIND ACHILLES' HEEL

The Planners have placed the American doctor on political display, and now offer him for piecemeal purchase at the ballot box. Omnipotently ignorant, these planners believe that, under political controls, proper medical care can readily be ordered and correctly channeled to its needy consumers.

Medicine has no place in the showcase of politics. The proper practice of medicine involves but two people, the doctor and his patient. Within this relationship the doctor can compassionately employ his individual art in applying the science of medicine to the ills of his patient. Any intrusion into this relationship violates its sanctity, hindering its effectiveness, to the detriment of our profession.

How can we prevent political intrusion? How can scattered individuals stand against a huge and coordinated political machine? We will have no champion in this. If medicine, as we know and cherish it, is to be preserved, we shall have to do the fighting — by ourselves. Quixotic? Let us see.

It is certain that public opinion does not now reside with "vested interest" American medicine. Nationally our medical organizations have little sway in today's power politics, even though their ideals are exemplary. Locally, however, you and I can have considerable political sway, simply by being real doctors and by openly declaring our need for freedom from governmental controls in order to continue being real doctors. In the humble sense of being the servants of the sick, we are important in our communities. The people will listen to our simple political voices, while totally ignoring the eloquent voices of our national organizations. It is obvious that, in the grossly mismatched contest into which we have been cast, we had best do battle at the local level, as this is the field most favorable to us. Perhaps we cannot win, but there is only one honorable way to go down in defeat — fighting.

The tactic employed by medicine, to date, has been that of warding off the blows of the aggressor. While this may gain us short periods of rest, because our assailant tem-

porarily fatigues in his wild flailing at us, it will gain us no victory. Battles are won by the sword, not the shield. But how can one attack so mighty a foe? What weapon have we to use?

In doing battle with an Achilles one must find his heel. This requires a knowledge of his anatomy, a recognition of his form. What is the form of our aggressor? He is not a prince, he is a principality. He is not an individual — he is a political ideal. He is utopia. He is a man-made heaven. He is the ultimate political evil.

Where is utopia's heel? All utopias have one similar, vulnerable spot. It is their economic philosophy. In all utopias the state is the provider of man's needs. In all utopias men are to labor as equals in fulfilling the state's requirements. But "the state" is, in reality, an aristocracy of a few human "supermen," who have elevated themselves above their fellows and dictatorially rule them through the guise of the all-providing state. These "supermen" may ascribe to the highest of principles, but they are all endowed with only human minds and human abilities, and so are woefully unfit to play as gods.

The ultimate weapon for use in piercing utopia's heel should be an economic theory. All utopian economic theories must be opportunistic, to give economic control to their dictatorial aristocracies, as the neo-Keynesian theories of today do. A proper economic theory, correctly relating the economic entities, should topple all utopian theories. Such a theory has been proposed.

In this fight to preserve our professional freedom from the shackles of regulatory governmental controls, we will be fighting to preserve, perhaps even to advance, the total freedom within our country. We are but on the path toward our Christian goal of true individual freedom. Our country, however, has been greatly blessed, for after two centuries it is still continuing down this path. And this path, in truth, is the road to glory.

So much for the sermon. Recently I re-

(Continued on page 146)

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## Comments From Your President

The Special Session of the House of Delegates of the AMA held in Chicago, February 6th and 7th, was an important milestone in organized medicine. As I view the results, three very definite products were produced by this session. First, a feeling of enthusiasm and optimism for the AMA's Eldercare Program prevailed during the entire session. The program is excellent and so far superior to the King-Anderson Bill that such an attitude was not difficult to engender. Seven resolutions were presented and these were considered in open session by only one committee. The resolutions and the ensuing discussion in the Reference Committee were definitely of a constructive nature. The second encouraging result of the special session was the very obvious confidence in the Board of Trustees, the special task force and the Legislative Committee that developed the Eldercare Program. They were not only given a vote of confidence, but they were asked to continue with any action that might improve or aid the Eldercare Bills that have already been introduced in the House and the Senate. Lastly, the adoption of the educational program concerning the comparison of the King-Anderson with Kerr-Mills and the Eldercare programs was complete and gratifying. While the AMA will give aid both financially and mechanically, the planning will be in the hands of the state associations. Your State Association is already busily engaged in our educational program which we believe will be most effective in Nebraska. Financially, the program does not yet require an increase in dues nor a special assessment, either in the AMA or the NSMA and probably none will be necessary. The NSMA, through the Board of Trustees, will expend up to \$2.50 per member and the AMA will contribute a matching amount. The vote on the floor of the House is expected to come only a few days after this letter, probably about March 15th.



Your Medical Service Committee has been hard at work on state legislative action. It is gratifying to have the fine help of so many doctors throughout the state. We are much encouraged about the probability of improving our dismal Kerr-Mills Bill so that it can be an effective instrument in caring for the elderly medically indigent. We have submitted ten points which would make our Kerr-Mills one of the strongest in the country. It is probable that the Legislators will reject some of these suggested improvements, but if a few can be incorporated, a workable plan will result. If the Eldercare Bill should pass the Congress, then an improvement of the Kerr-Mills is absolutely essential. We would appreciate it if each of you would contact your Legislator about the urgency of improving Kerr-Mills. This is important not only to preserve free enterprise, but also to give medical care to those who need care. Now is the time!

RICHARD GARLINGHOUSE,  
President.



# Hepatic Artery Aneurysm

## Report of a Case With Successful Ligation

**A**LMOST 150 cases of hepatic-artery-aneurysm have been reported in the literature to date. Although reports of successful surgical treatment are becoming more common, there are still only 37 of these recorded. For this reason, a brief review of the entity is presented along with the following report.<sup>1, 2, 3, 5</sup>

### Case Report

Mr. R. C., a 61-year-old, retired salesman with known mild pulmonary insufficiency, was admitted to Lincoln VA Hospital on November 9, 1961 for evaluation of epigastric distress. During the six months prior to admission he had had two episodes of epigastric pain of approximately one month duration. Further questioning brought out a good history of peptic ulcer disease.

Physical examination revealed a thin, elderly-appearing male with signs of pulmonary insufficiency, mild epigastric tenderness and a large left inguinal hernia. An upper gastrointestinal X-ray series showed a 2 cm x 2 cm gastric ulcer on the middle portion of the lesser curvature. He was placed on a conservative ulcer regimen. Gastric analyses and gastroscopy were performed and were consistent with the radiologist's opinion of benignity. However, he obtained neither symptomatic relief nor radiologic evidence of healing on conservative therapy.

On January 19, 1962 he underwent Bilroth I gastric resection for a benign gastric ulcer. During manual exploration of the abdominal contents, an aneurysm 1.5 cm in diameter was palpated in the common hepatic artery. It was felt to be proximal to the gastroduodenal artery. Because of his pulmonary status and gastric problem, the aneurysm was not approached at this

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operation. His recovery from gastric surgery was uneventful.

During his convalescence retrograde femoral catheter aortograms were performed but failed to show the exact location of the aneurysm.

Eight months later the patient was readmitted to Lincoln VA Hospital and on November 2, 1962 underwent ligation of a 2.5 cm diameter common hepatic artery aneurysm. At operation, the aneurysm could be easily seen through the posterior parietal peritoneum. There was no evidence of recent or old hemorrhage. There was considerable palpable evidence of arteriosclerosis both in the common hepatic artery proximal to the lesion and in the immediately adjacent celiac axis and aorta. The common hepatic artery was isolated both proximal and distal to the aneurysm. The gastroduodenal artery was seen to leave the hepatic artery distal to the aneurysm. The common hepatic artery was temporarily occluded both proximal and distal to the aneurysm with no palpable decrease in pulsation in the right or left hepatic arteries. We felt this indicated a good collateral circulation to the liver via the gastroduodenal artery and that simple ligation of the aneurysm was the treatment of choice. This was accomplished by doubly ligating the common hepatic artery both proximal and distal



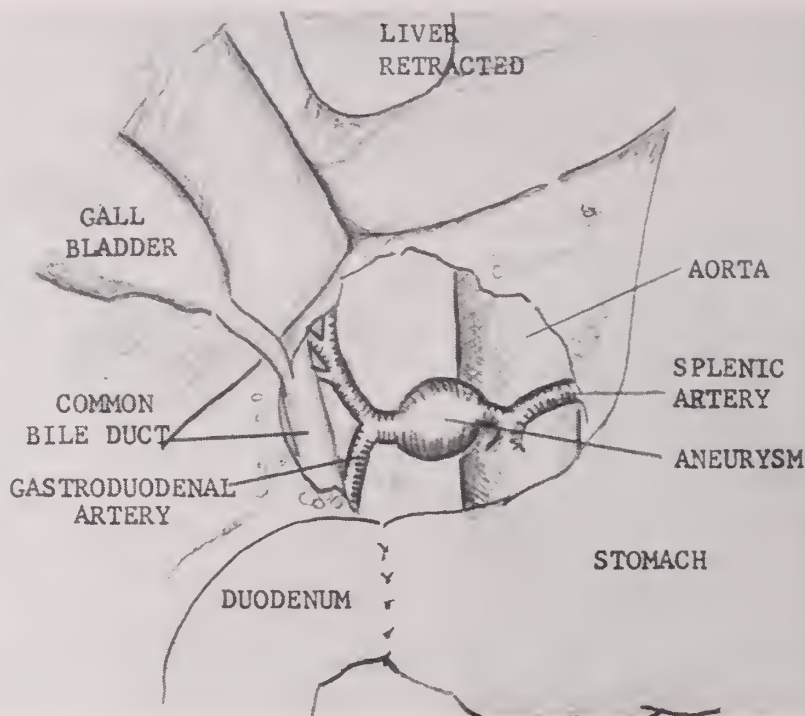


Figure 1

to the aneurysm with 2-0 cotton ties. The procedure was uneventful and his convalescence was smooth.

His serum bilirubin, alkaline phosphatase, thymol turbidity and bromsulphalein (BSP) were checked one and seven days postoperatively. These were normal save for the BSP which showed 11 per cent retention at 45 minutes on the day following surgery. Seven days postoperatively, his BSP retention had decreased to 3.1 per cent at 45 minutes.

He was discharged home on the fourteenth postoperative day.

The patient was readmitted to our medical service for ten days in July 1964 because of chronic bronchitis. Unfortunately, liver function tests were not repeated, but, historically, he was drinking more than a quart of wine per day without gastric complaint and on physical examination had no evidence of hepatic enlargement or hepatic insufficiency.

## Discussion

*Etiology* — The etiology of these lesions

is in doubt. The older articles list infection as the most common cause. The average age was 38 in cases reported prior to 1942. However, almost all cases reported since then have been in the arteriosclerotic age group. It seems reasonable that this is the most common etiology today. Syphilis, trauma, tuberculosis and peri-arteritis have also been incriminated.<sup>4</sup>

*Pathology* — Hepatic - artery - aneurysms are three times more common in males, are extremely variable in size, are single in almost 90 per cent of the cases and extrahepatic in 70 per cent. Of the extrahepatic cases, the common hepatic artery is involved in over half (55%) the cases. Next most common is the right hepatic artery (35%). The remainder involve the cystic, left hepatic, and gastroduodenal arteries.

The aneurysm makes its presence known by rupture in 80 per cent of the cases; 47 per cent rupture into the free peritoneal cavity; 35 per cent into the bile ducts, and the rest rupture into the gallbladder, duodenum, stomach or portal vein. There are only two recorded "cures" from spontaneous thrombosis.

*Clinical Picture* — There are three com-

mon complaints; pain, jaundice, and hemorrhage. Pain is the most common and is noted in two-thirds of the cases. It is of much the same character and radiation as that seen with gallbladder disease.

Jaundice is seen in almost half the cases and is considered evidence that the aneurysm involves the common hepatic artery or one of its main branches and compresses the extrahepatic biliary tree.

Massive gastrointestinal hemorrhage manifested either as hematemesis or melena is reported in one-third of the cases and indicates rupture of the aneurysm into the biliary tree, stomach, or duodenum.

The best chance for survival obviously occurs in cases such as reported here where the aneurysm is discovered prior to rupture. There are, in addition, several survivors following rupture into the gastrointestinal tract or biliary tree. There is only one case in the literature of survival following rupture into the free peritoneal cavity.

*Treatment* — If the aneurysm is located between the celiac axis and the gastroduodenal artery, simple ligation or excision is sufficient since collateral flow to the liver can be maintained via gastroduodenal artery-anastomosis with the superior mesenteric artery. A majority of the survivors fall into this group.

If the aneurysm is located distal to the gastroduodenal artery, a much more serious problem exists. Even though there are increasing numbers of cases reported where in ligation of the hepatic artery has not been followed by hepatic necrosis, the surgical procedure must include attempts to reestablish the hepatic arterial blood supply either by aneurysmorrhaphy, resection with end-to-end anastomosis or resection with splenohepatic anastomosis. Wrapping and wiring of these aneurysms is not considered acceptable.

### Summary

A case of common hepatic-artery-aneurysm, fortuitously discovered and successfully ligated, is presented. The etiology, pathology, clinical features, and treatment are discussed briefly.

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"From the moment a child is born, the fight against death begins . . ." (Billy Graham: *Peace With God*, p. 67).

# Experimentation

in a

# Community Services Division\*

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and

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**A**S a psychiatrist explores outside the walls of the safe confines of the hospital, he is in many ways like the voyagers during the age of discovery. Oftentimes he sets foot on terrain which is beyond his ken and is called upon to improvise and apply his skill in dealing with problems that he had never anticipated. Sometimes he finds himself sailing through the myths of mental illness. At other times he is caught up in the streams of determinism to be carried past the rocks of crisis. In trying to make his landfall he is inclined to trust only those other mariners who understand the sea about him.

The staffs of mental health divisions of state level<sup>4</sup> have usually replicated the clinical team of psychiatrist, psychologist, and social worker. During the past eight years, and more particularly in the past two years, with the aid of a National Institute of Mental Health grant,<sup>5</sup> we have departed from such procedure by adding staff from disciplines not ordinarily found in the central office. This paper will attempt to describe such a Community Services voyage.

Where population is dispersed over a large area, there is a lag in discerning mental illness and in devising a rapid means for coping with it. With but few exceptions, psychiatrists, psychologists, and social workers gravitate toward larger population centers. This can readily be verified by a perusal of specialist directories. Nebraska is no exception with only two population centers that exceed a population of 100,000 — approximately 98 per cent of the psychiatrists not in state hospital service are located in Lincoln and Omaha. Patients travel-

ing from the western end of the state, 470 miles away, are made medically indigent purely through travel costs in arriving at the psychiatrist's door.

With this in mind, and operating under the joint aegis of the Board of Regents and the Department of Institutions, the Nebraska Psychiatric Institute established a Community Services Division, in 1956. Its prime mission is to develop a network of psychiatric services outside the state hospital doors. With legislative support, clinics were developed at Scottsbluff, North Platte, Lincoln, and Hastings, (see Illustration 1) forming a minimum network of quality services for the medically indigent. A review of the AMA Medical Service areas suggested the establishment of mental health service areas, six in number (see Illustration 1). Within the six mental health service areas, clinics have been established to reduce the amount of travel time for both the patients and the professional staff. Every effort has been made to locate the clinics where a patient need not travel more than two hours to get one hour's service.

One of the vital forces in keeping clinic staffs alive is the communications between various staff members. All of the clinic staffs come into the Nebraska Psychiatric Institute every six to eight weeks to have

\*—Presented at the 120th Annual Meeting of the American Psychiatric Association, May 7, 1964, Los Angeles, California.

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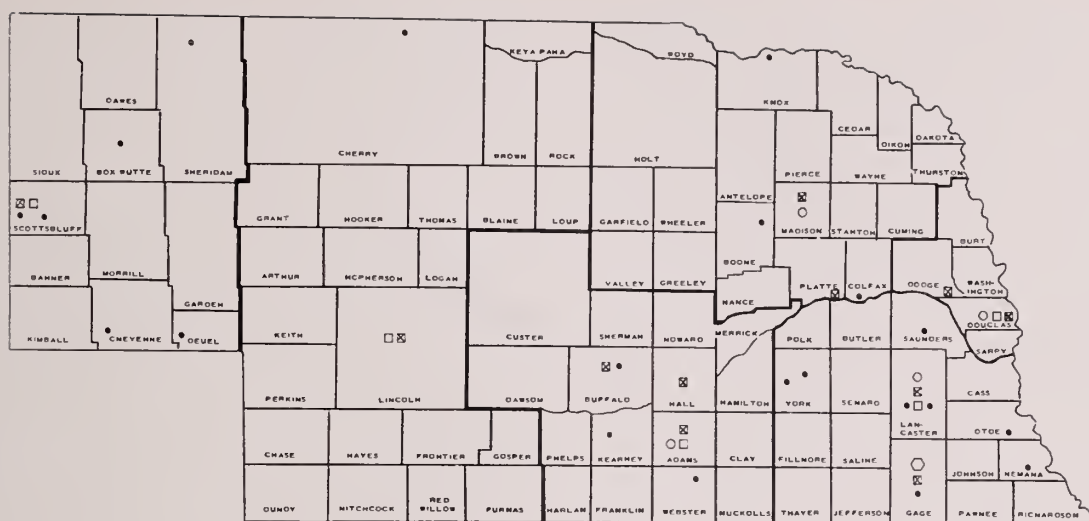
2—Former Director of Volunteers and Education, Community Services Division, Nebraska Psychiatric Institute.

3—Coordinator, Mental Health Education, Community Services Division, Nebraska Psychiatric Institute.

4—Through a working agreement, the Clinical Director of the Community Services Division serves as Mental Health Consultant to the State Department of Health, and the Community Services Division functions as its Division of Mental Health.

5—This project is supported in part by the Public Health Research Grant MH 00968 from the National Institute of Mental Health, and with Mental Health Act funds through the Nebraska Department of Health.





- Lines — - Mental Health Service Regions
- Squares □ - Mental Health Clinics
- Circles ○ - State Mental Hospitals
- Square X ☒ - Cities with over 10,000 population (1960 census)
- Hexagons ⬡ - State Home and School for Retarded
- Dots • - Psychiatric trained GP's

Illustration 1

an inter-change on staff problems within the Division, and to meet and become part of the activities of the Institute in Omaha. Staffs are thus kept current in various training and research activities. Conversely, it is necessary for the Central Office staff to do a considerable amount of traveling as backup personnel for the clinics. This is accomplished by means of light plane travel at biweekly intervals. Thus, face-to-face involvement with various staff members is a frequent occurrence. It is expected to simplify a portion of this consultative-supervisory activity through the use of two-way television in conjunction with another NIMH project.

Quite aside from maintaining the contacts between various staff members of the Division, the establishment of extensive contacts with agencies throughout the state suggested the utilization of a variety of persons other than those commonly used in a mental health division. This entails the use of a *minister* for contacts with the clergy; a *mental health nurse* for work with nursing homes and child care homes;

an *occupational therapist* for work in general hospitals and nursing homes; a variety of *mental health education personnel* to structure courses, seminars, symposia, lectures, audio-visual aids and publications; a *volunteer services consultant* to extend work with voluntary agencies and volunteers; and a team of *medical sociologists* to inquire into the sociological aspects of mental health care. The remainder of this paper will be devoted to specific experiences which indicate some of the ways we are utilizing staff and involving the community in action for mental health.

*General Practitioners:* Working in cooperation with the Nebraska Psychiatric Institute's Division of Training and Education, the Community Services Division provides Mental Health Act funds to secure the services of seven physicians each year. To date, some twenty-one family doctors have been trained in the course, "Office Psychiatry for General Practitioners." The course is designed to aid family doctors in evaluating and treating their patients who have mental disorders. As will be noted by the

map, (see Illustration 1), these physicians come from towns ranging in population from 750 to 20,000. Each physician averages approximately twenty-four patients per month in treatment. A direct review of the patients reveals they are in many instances caring for patients having agitated depressions of midlife, chronic schizophrenia, and chronic neurotic reactions, and in some instances, management of epileptics and mentally retarded. A log that we have kept indicates they have treated and managed 3180 patients in their home-setting during the past five years. This, then, extends a state-wide referral and screening network for other physicians, the clinics, and the state hospitals.

### Consultation

Consultants work in varied combinations depending on areas of concern. They avail themselves of contacts which could conceivably promote better mental health management in community agencies.

*Minister* — There are approximately 3000 ministers in the state which exceeds the total number of physicians by 1500. A referral study revealed a significant number of clergy involved in the referral process of disturbed persons. It, therefore, seemed appropriate to have a clergyman (Director of Clinical Pastoral Services) involved at the central office level to gain an understanding of the functioning of ministers in the health-framework of reference. Working in cooperation with clinic staffs, programs are offered to meet the expressed needs and interests of the clergy in the various mental health areas of the state. In two such areas, these inservice training programs have led the clergymen to form associations for religion and mental health. These associations now provide a local stimulus for educational programs and study through monthly seminars and weekly discussion groups.

In conjunction with the mental health nurse-consultant, an on-going seminar is conducted with the nurses of two general hospitals and the area clergy in finding ways and means of understanding each other's roles and better coordinating their

services for the ill. Certainly such joint conferences appear to have gradually diminished the mutual misunderstanding with which these two groups have frequently viewed one another when working in the health setting of the hospital.

*Mental Health Nurse Consultant* — Two activities of the Mental Health Nurse Consultant exemplify the extensive contact work which frequently must be done in troubleshooting services for the mentally ill. The first of these started with the consultation to the local Visiting Nurses Association of the City-County Health Department in Omaha. It was noted that many of the elderly patients discharged from a state hospital serving the area were in need of continued medical care. However, the hospital, which is located at a distance of over a hundred miles from the city, could not spare the workers to provide this supervision. As a result of the consultant's inquiry, a committee on aftercare practices for the geriatric mentally ill patient was established and has continued its work for the past three years. In the process, the following agencies have been involved: the State Hospital, the City-County Health Department, the County Welfare Department, United Community Services, the Visiting Nurses Association, the County Hospital, and our Division. Commitment, treatment, care and aftercare practices have been reviewed and modified to provide more continuity in the management of the elderly patient. One off-shoot of this committee's work was the formulation of the nursing care project to be demonstrated by the state mental hospital for nursing care homes. The coordination of agency activities has brought about increased understanding of each agency's role by the others.

The second use of the nurse consultant has been in providing mental health nursing on a demonstration basis in a clinic which is functioning on a part-time basis. Here the nurse has provided continuity of supervision in the absence of the psychiatrist, psychologist, and social worker in several ways: first, in making home visits to see what is happening at the homes of patients during the intervals between the psy-



chiatrist's visit to the clinic; and, secondly, maintaining contact with the general practitioners in the community, particularly where medical intervention is warranted in the absence of the psychiatrist. Her work has been extremely valuable in pointing up to many agencies within the community which tasks can best be accomplished by the clinic and those which necessarily need be performed by other individuals within the community.

*Occupational Therapy Consultant:* Pursuing the general notion of structuring psychiatric services in a hospital without walls, we are experimenting in the North Platte area in relating outpatients to community artisans. The Occupational Therapy Consultant has evaluated the skills of local craftsmen; matching these with patient needs and in accord with the clinician's goals. Thus psychiatrically oriented and managed patient-time is extended. Notes regarding patient functioning are augmented by the craftsmen's observations. The result is an extension of psychiatric management into the shop and home under the aegis of occupational therapy. An important by-product has been the increased understanding of clinic usage by the community.

The Occupational Therapist, the Mental Health Nurse, and the Volunteer Services Consultant are involving many nursing-home staffs of southeast Nebraska in reviewing current program and developing inservice training. This has evolved from the nurse's contacts with the nursing home administrators and staffs through the activities of the Nursing Home Association. One should note in passing that there are 8500 patients in the nursing and domiciliary-care homes in Nebraska (more than twice the number of patients in the mental hospitals); that the Department of Health, through its Division of Public Health Nursing, has a regulatory and supervising responsibility through licensing; and that both the Department and the nursing home operators have expressed concern over the improvement of services to their geriatric patients beyond their physical needs. These three consultants have, therefore, stepped into this breach of operational anxiety in an effort to aid

the personnel in developing humanizing services. It is still too early to evaluate these changes in detail, but serious efforts are being made to reduce or change restraint time into activity time.

*Volunteer Services Consultant:* The close connection between volunteer involvement and community understanding which has been experienced so often in the hospital setting led to the development of this position by a coordinator of mental health education. Since there was only one city in the state with an active mental health association, efforts were made to involve community leaders in mobilizing mental health groups. This culminated in the formation of four area mental health associations and a state association for mental health. To a lesser degree the activities of the division have also aided in the development of associations for retarded children.

Currently, the Volunteers Service Consultant is directing her attention towards structuring volunteer programs for the mentally ill in settings other than mental hospitals. Besides nursing homes, this would include child care homes, day care centers, regional clinics and general hospitals. Activities through women's clubs, home extension groups, and various service organizations are under way.

### **Mental Health Education**

There are at least four mental health educators to execute the work of this education-information section. Ranging from the senior position of coordinator to that of trainees, they have backgrounds either from the field of education or journalism. Besides the usual activities of attempting to keep the public informed on matters pertaining to mental health, these individuals have been involved in projects intended to have an extended effect.

The first of these have been concerned with the development of summer session seminars at four of the state colleges and three private colleges. The curriculum is intended to expose practicing teachers to a dynamic understanding of the behavior problems they encounter in their students.



Based on our interchange of experience with the teachers, a syllabus has been devised and some 1100 teachers have taken the course in the past eight years.

The second project has to do with the recruitment of young persons to the field of human sciences. Since the extent and the complexity of a medical school hospital does not lend itself readily to mobility, we have developed a device of holding human science conferences. High schools of the state are invited to send a journalism student and a science student in their junior year for a visit to the campus. Every effort is made to acquaint the visiting students with the range and diversity of career opportunities that are available. They are then encouraged to write about their experience in their own terms and to share this with their fellow students. Awards are made for the best feature article, best news story, and best editorial. These are judged by the staff of the University of Nebraska Journalism School. Such activities as this have the added advantage of joining various schools and departments of the University from the campuses in Lincoln and Omaha.

### Research

There are three medical sociologists in the division and they serve to join the departments of sociology and psychiatry and neurology. In sociological inquiries in the field of medicine, an extensive study of the referral network pertaining to the mentally ill has been initiated, but is not yet ready for report in detail. The intra-staff activity evaluations have brought into bolder focus the semantic and ideational differences and difficulties of fielding such a diversified staff as this.

### Planning

With the addition of the comprehensive mental health and mental retardation planning programs to the Division's activities, a planning section was created. Through the

Governor, and executive and advisory committees, these plans are being developed. As nowhere else the inter-locking nature of the various sections of the Division is exemplified in the extended activities of planning section's staff. It also expands its activities laterally through various executive departments and the university. It is anticipated that since planning cannot be done without ultimately evaluating program that this will be an on-going part of the section's activity. One plans, one evaluates to plan again and to evaluate again; thus, continuity of effort on behalf of the mentally ill and retarded can be maintained.

In summary, the need for further study of lateral, as well as vertical involvement, and of compacts of concerted action, as well as power structure, appears indicated for the worker who comes into the field of psychiatry from outside the medical framework of reference, as well as from the worker within the field. There appears to be lack of comprehension that one so often sees, for example, between law and medicine. It remains to be seen as to how well we can study our problems, and each other, without losing sight of our primary mission — which is to extend services to mentally ill and aid them in their convalescence closer to home.

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# Regional Enteritis

In GENERAL HOSPITALS

**T**HE descriptions of the clinical manifestations of regional enteritis are detailed and complete.<sup>1,2</sup> The typical picture of diarrhea, abdominal pain, weight loss and a right sided lower abdominal mass in a young, often Jewish, adult is well recognized. Our knowledge of the disease, however, is primarily derived from the experiences of a relatively few medical centers whose excellence in the field has attracted a large number of specifically referred patients. The purpose of this paper is to describe regional enteritis as observed in an essentially unselected population of patients admitted to general hospitals.

## Methods

A survey was made of all patients admitted to hospitals affiliated with the Creighton University School of Medicine during the six year period, 1957 to 1963.\* The average yearly admission rate for these hospitals was 37,392. The percentage of patients proclaiming Jewish religious affiliation was 0.4 per cent. Individuals in whom a clear-cut diagnosis of regional enteritis was established by tissue section, typical appearance at operation, or with classic radiographic findings were selected. This study consists of an evaluation of the histories, physical characteristics, laboratory values, X-ray findings, and long term course of these patients.

## Results

Of the 224,352 admissions, 26 met the diagnostic criteria revealing an incidence of one per 8628 admissions. There were eighteen men and eight women. Two of the patients were negroes, none was Jewish. Their ages ranged from 13 to 53 and averaged 27 years.

Pertinent historical facts disclosed a fam-

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ily history of ulcerative colitis in one patient, and of regional enteritis in another. Two patients had psychic aberrations sufficient to warrant specific therapy. Four veterans had a history of amebiasis, but without evidence of recurrence or residual disease during the period of study. There was a history of peptic ulcer in four, lymphosarcoma in one, renal infection in two, and allergy in one. There was no apparent relation between these entities and the onset or symptoms of regional enteritis.

As shown in table 1 the onset of the disease was acute or episodic in nine patients and insidious in 17. The average duration prior to diagnosis in the insidious onset group was six years. Abdominal pain was noted in 22, diarrhea in 17, and constipation in three. Gross blood was present in the stools in eight, and significant weight loss, in 14. Seventeen patients experienced nausea and vomiting, and two complained of dysuria.

Physical examination revealed tenderness and muscle guarding in 20, an abdominal mass in nine, and abdominal fistula in two, clubbing of the fingers in two, and subcutaneous nodules in one, as is shown in table 2. Five patients had fever and three peri-rectal fistulae were noted. Laboratory studies demonstrated anemia in 10 and a leukocytosis in five.

Barium enema or small bowel series, or both, were carried out in 19 patients. Small bowel or cecal lesions were present in 17. In two patients no abnormalities were noted. The radiographic examination was considered diagnostic of regional enteritis in 13.

\*Creighton Memorial St. Joseph's Hospital, St. Catherine's Hospital, Omaha Veterans Administration Hospital, Lincoln Veterans Administration Hospital.

Table 1  
SYMPTOMATOLOGY IN REGIONAL  
ENTERITIS

| Symptoms                    | No. Patients                    |
|-----------------------------|---------------------------------|
| Onset                       |                                 |
| Acute or episodic           | 9                               |
| Insidious                   | 17                              |
| Duration prior to diagnosis | 6 years<br>(range 1 - 16 years) |
| Abdominal pain              | 22                              |
| Diarrhea                    | 17                              |
| Constipation                | 3                               |
| Gross blood in stools       | 8                               |
| Weight loss (20 lbs.)       | 14                              |
| Nausea and vomiting         | 7                               |
| Dysuria                     | 2                               |

Table 2  
PHYSICAL FINDINGS IN REGIONAL  
ENTERITIS

| Abnormality                     | No. Patients |
|---------------------------------|--------------|
| Tenderness and guard in abdomen | 20           |
| Abdominal mass                  | 9            |
| R. L. Q.                        | 8            |
| L. L. Q.                        | 1            |
| Abdominal fistula               | 2            |
| Clubbing of fingers             | 2            |
| Subcutaneous nodules            | 1            |
| Anemia (less than 12 gm. Hb.)   | 10           |
| Leucocytosis (12,000 to 18,000) | 5            |
| Fever                           | 5            |
| Perirectal fistula              | 3            |

The lesion was located in the terminal ileum in 17, and in the mid-ileum in two. Generalized ileitis was present in seven. The colon was involved in four.

Sixteen operations were performed. There were 13 single operations. Five of these were ileocolostomies and eight were resections with ileocolostomy. All six multiple operations were resections with ileocolostomy. Recurrence rate following surgery was not evaluated.

### Discussion

Regional enteritis is a nonspecific inflammatory disease of the intestine which frequently involves the terminal segments of the ileum. It may occur as an acute apparently self-limited illness, or as a chronic disease with malabsorption, recurrent obstruction, and fistula formation. The

etiology is unknown but current opinion favors the hypothesis that not one, but a number of etiologic agents may lead to the characteristic structural change in an individual with a special predisposition for the disease.<sup>3</sup>

No new knowledge about the pathology or etiology of the disease has been gained from our relatively small series. The incidence of a familial history of enteritis and the age of onset in this series correspond to other larger series. The male incidence of 67 per cent in this series, as compared to the usual 55 per cent male incidence, and the relatively frequent past history of amebiasis is probably no more than a reflection of the fact that two Veterans Administration Hospitals were included in the study. The absence of Jews and the presence of negroes is of interest since the disease is said to be common in the former and rare in the latter.<sup>4, 5</sup>

This study supports the thesis that the disease is not encountered frequently. Nevertheless, 26 cases were found over a six-year period in a hospital population which might be expected to have a low incidence. Twenty of these were initially diagnosed during this period. This apparently indicates an increasing incidence of the disease or an increasing awareness of the entity.

The frequency of regional enteritis in this study easily exceeds the finding of only 13 patients with this disease over a 12 year period at Detroit Receiving Hospital where the annual admission rate is 18,000.<sup>4</sup> It correlates quite well, however, with the series from Harper Hospital whose patient population might be presumed to be similar to that of this study.<sup>4</sup> The criteria for inclusion in the present series necessarily excludes all but the relatively advanced cases, and it is likely that the actual incidence of early cases or minimal lesions may be considerably higher. Consideration of these facts seems to cast doubt on the implication that this disease is "exceedingly rare in general hospitals" as stated in a recent gastroenterology text.<sup>7</sup>

In general, the symptoms and physical findings in this report were quite similar to



those in the large series of Crohn and Van Patter.<sup>1,2</sup> Nine patients (34%), however, presented with the acute onset of right lower quadrant pain and tenderness, and were operated upon with the tentative diagnosis of acute appendicitis. This is a somewhat higher incidence of the acute variety than expected, and is probably a reflection of the hospital population difference previously discussed. The presence of clubbing of the fingers in two patients and the finding of a rheumatoid nodule in one without other features of rheumatic disease was of interest.

The anatomic distribution of the lesions was similar to that of other series. X ray again proved to be the single most valuable diagnostic aid.

Although medical therapy was difficult to evaluate objectively, it was, in general, designed to maintain nutrition, control diarrhea, restore blood loss, and control infection. There were no obvious beneficial effects from the use of long term nonabsorbable sulfa preparations. Glucocorticoid preparations were used infrequently. Refractory disease, absorptive difficulties, and toxic febrile episodes were the usual indications for their use. The anticipated beneficial therapeutic effect resulting from the efforts of the understanding, sympathetic physicians could not be evaluated.

In the present series resection was carried out more often than by-pass procedures without resection. Although there is some statistical evidence to suggest that by-pass procedures are accompanied by fewer complications and a smaller recurrence rate, this

evidence is difficult to evaluate. Both methods of approach have proponents of similar experience and skill.<sup>8,2</sup> Although not apparent from this series, the procedure of choice when the surgeon encounters regional enteritis at exploratory laparotomy is to close the abdomen without definitive surgery unless the complications of obstruction or fistula formation are encountered.

### Summary

Although regional enteritis is a rare disease, it appears to be more common in a general hospital population than previously suspected. An increased awareness of the disease together with early roentgenologic examination will lead to earlier definitive diagnosis and, hopefully, better treatment.

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Epilepsy is a major health problem — with more victims last year than cancer and tuberculosis combined, according to The Epilepsy Foundation. For facts about epilepsy write to: The Epilepsy Foundation, Washington, D.C. 20005.

# Hemorrhoid Management

*Of the* NEW MOTHER

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**I**N taking the history of female patients, I have been impressed with the number of women who relate their initial anorectal symptoms to their first pregnancy. Ruiz-Moreno,<sup>1</sup> in reviewing 500 patient-histories, noted that 80 per cent dated the onset of anorectal symptoms to their first pregnancy. Eighty-five per cent of parous women develop symptoms with their first pregnancy, according to Marks and Thiele.<sup>2</sup>

These reports stimulated my curiosity as to what the standard obstetrical text books suggested for this aggravating problem. DeLee's twelfth edition by Greenhill, published in 1960, offered nothing more than his eighth edition published 18 years earlier. This stressed the importance of bowel regulation, and offered some suggestions for symptomatic relief of hemorrhoids. The twelfth edition of Williams Obstetrics, by Eastman and Hellman, published in 1961, offers suggestions which are quite similar. Neither advised actual treatment of the pathologic entity, only palliation. Furthermore, I have had patients state that they were advised to postpone needed surgical treatment until their child bearing years were over. This frequently means suffering recurring discomfort for ten to fifteen years, thus increasing morbidity.

This brings up the question whether subsequent pregnancy will cause a recurrence of the hemorrhoids. Raymond Jackman,<sup>3</sup> chairman of the proctology section at the Mayo clinic, has stated, "In my experience, if the hemorrhoids are completely removed, future pregnancies will not cause them to return." Marks and Thiele,<sup>2</sup> concur with this opinion in their article, "Proctologic Disease in Pregnant and Parous Women."

I believe that many of these patients can be materially aided after re-evaluating the management of this problem.

For years many surgeons felt that anorectal surgery in the immediate post-partum period was not indicated. It was the opinion that hemorrhoids of pregnancy rapidly subsided and surgery was unnecessary. It is true that the excessive edema and thrombosis do subside to a degree; but if these patients' symptoms are closely followed, it will be noted that only first and second degree hemorrhoids become completely asymptomatic.

Recently, I have operated upon several post-partum patients with complicated hemorrhoidal disease, and was quite impressed with the smooth healing and rapid convalescence. Support was added to this impression when I heard presentations by Ruiz-Moreno,<sup>1</sup> and Hampton,<sup>4</sup> at the meeting of the American Proctologic Society in Philadelphia, May, 1964. Both surgeons did separate studies of anorectal surgery in women, post partum, and both were impressed, not only with the satisfactory results of surgery, but also with the ready acceptance of the procedure by the mothers and obstetricians alike.

I suggest that mothers with certain types of hemorrhoidal pathosis be given the opportunity for operation upon their hemorrhoids immediately post partum when the conditions indicate that it should be done. This management does not apply to patients with all types of hemorrhoids, only to those with complications. Patients with first and second degree hemorrhoids should not have surgical treatment at this time, as most of these will become asymptomatic.

## Qualifying Indications for Post-Partum Surgery

First, there should be no complications associated with the pregnancy which would

contraindicate an additional procedure. Second, the patients to be considered for hemorrhoidectomy must be carefully selected. These would include:

- Patients with third degree hemorrhoids, that is, hemorrhoids which prolapse with straining, and remain so until manually reduced.
- Patients with fourth degree hemorrhoids, those which prolapse and are not reducible.
- Patients with excessive fibrotic and redundant tags prior to pregnancy which intermittently cause discomfort.
- Patients with chronic fissures, and those with recurrent hemorrhoidal disease prior to the present pregnancy.

#### **Advantages of Post-Partum Hemorrhoidectomy**

Hemorrhoidectomy can be done within 48 hours after delivery without the need of general anesthesia. This procedure can easily be done using caudal or local infiltration anesthesia. If proper surgical technique is used, the patients can expect permanent relief even if additional pregnancies occur.

A minimum of time is involved with the patient being able to leave the hospital only one or two days later than for the delivery alone. No additional arrangements need be made for the family's care, and the inconvenience of another hospitalization is avoided.

Hemorrhoidectomy in the immediate post-

partum period results in less postoperative discomfort and an accelerated healing time. Ruiz-Moreno's<sup>1</sup> experience shows healing time is increased 25 to 30 per cent. This undoubtedly is due to the altered physiology of pregnancy, with a 25 to 30 per cent increase in the blood volume, increased vascularity, loosening of the connective tissue, and muscle hypertrophy.

#### **Conclusions**

Hemorrhoidectomy can readily be done 24 to 48 hours post partum, thus eliminating an additional hospitalization.

An annoying and disagreeable condition can be eradicated with the anticipation of lasting results providing proper technique is employed.

The procedure has good patient-acceptance.

This operation can be done under local or caudal anesthesia.

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Choking on safety pins and other objects is the leading cause of death in the home in children under five, according to a scientific exhibit at the annual convention of the American Medical Association.



The

# Role of Health Education in Teacher Preparation\*

EDUCATION for sound health has been long recognized as an important function of the school. Health was named as one of the seven cardinal objectives of education in the 1918 report of the Commission on the Reorganization of Secondary Education. Since that time several other reports have recognized the importance of health among the primary purposes of education, or as being essential to the attainment of other educational objectives.<sup>1</sup>

For some reason, many in the field of education seem to have the idea that health principles can be adequately taught by anyone who has a certificate to teach. Although health is one of the basic objectives of education, many apparently believe that health principles and practices, as a concrete body of knowledge, can be obtained by each succeeding class and generation of teachers either through self education or through assimilation from classrooms used by previous teachers.

The fact is, in order to teach health, teachers must be equipped for it just as they are for teaching the tool subjects. This is even more evident when the teacher is required to participate in the activities given by Southworth<sup>2</sup> as requirements if reasonable goals in school health are to be reached.

Southworth also states that "to perform these tasks, the teacher needs both pre-service and in-service preparation, and therein lies a responsibility of the teacher-preparatory institutions — teachers' colleges and schools of education."

Dr. Berthet,<sup>3</sup> director general of the International Children's Center agrees that the teacher is a central agent in health-education instruction, and he outlines what he considers to be a necessary course (or courses) of instruction for teachers.

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Because of the great importance of the matter, a survey to determine what really was being done in the teacher education programs in Nebraska was authorized by the Nebraska Public Health Association. A survey by Cushman<sup>4</sup> listed fifty-five institutions in the United States which offer a teaching major in health education at the undergraduate and graduate levels. None of these is in this state. *To further complicate the local situation, the Nebraska Unicameral repealed a state law (in 1957) which required the teaching of health education to all teachers.* (Italics by editor)

In this climate, a committee on Health Education in Teacher Preparation was appointed as a subcommittee of the Executive Committee, Nebraska Public Health Association to plan and execute a study of the role of health education in teacher preparation.

The specific purposes of the study were (1) to determine how many institutions in the State of Nebraska required a course or courses in health education, and (2) to learn

\*This survey was made possible through grants provided by The Nebraska Heart Association, The Nebraska Dental Association, and The Nebraska Public Health Association.

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what topics were treated in such a course. The committee recognized the fact that much material on health may be given to prospective teachers in such courses as biology, psychology, and physical education. Consideration was given to including these courses in this survey, and some visits were made with this idea in mind. It was recognized early that all students in teacher education did not participate in all of these courses and therefore would not have the same total information in health education. Since the committee was interested in the basic knowledge that students preparing to teach would have regarding the subject of health, it was decided to limit the survey to the course or courses in health education required of all education students.

Information regarding the courses was obtained by a personal visit with the instructor in each course. Information requested included the (1) course title, credit clock hours, department, and for whom required; (2) author, title, publisher, and copyright date of text used; (3) purpose, aims, and objectives of the course; (4) use and source of outside readings and teaching aids; (5) teaching and evaluation procedures; (6) source of course outline and subjects covered; and (7) relationship of this course to other courses. In addition, the instructor was asked to check, against a prepared list, the topics that were included in the course. The checklist included fifty items which the Committee felt should be included in a course in Health Education.

There are twenty institutions of higher learning in Nebraska which offer courses in teacher education. Of these twenty, six (30%) do not require a course in health education. Of the fourteen institutions that do require a course in health education, twelve require one course while two require two courses. On the basis of subject matter, these can be separated into three categories: personal health (12 schools), safety education (2 schools), and school health problems (2 schools).

In colleges where more than one section is taught, the sections are treated as different courses when the classes are taught

by different teachers, with differing objectives, texts, or course content. With this identification, the 14 schools offer 17 courses in personal health, two courses in safety, and two courses in school health problems. The decision to place the courses in these categories was based upon the information obtained from the instructor of the course as to the basic reason for the course. In one school the course was designed solely to present safety education to prospective teachers. It is listed here as a safety course, although the instructor includes a large component of personal health.

Fifteen of the seventeen courses listed in the Personal Health category are focused on personal health and health knowledge of the individual. Only two of the courses provide material for the prospective teacher as a teacher. One safety course is taught for the future use of the prospective teacher, while the other is provided for the personal use of the individual. Both courses listed in the School Health category are provided for the use of the future teacher.

There is a wide disparity in the clock and credit hours of these courses, ranging from one course with one credit hour (15 clock hours) to four courses with three credit hours (54 clock hours). The difference is obvious between the one, two, and three hour courses. Not so obvious is the difference between a two-credit — 30 clock hour course, and a two credit — 36 clock hour course, although the latter is 20 per cent longer than the former.

Six of the 21 courses are presented by Departments of Education, 13 by Departments of Physical Education, and 2 by Departments of Health and Physical Education. One course is in the Department of Education but is taught by the faculty of the Department of Physical Education. Another course is in the Department of Physical Education and is taught by members of that department at the request of the Department of Education. In two of the schools, the basic responsibility for the course has been assigned to the school nurse.

A variety of texts were in use. C. E. Turner's *Personal and Community Health* was



used by seven, Schifferes' *Essentials of Healthier Living* by three and Diehl's *Text-book of Healthful Living*, and Hein, *et al's Living*, by two each. Six other texts were used in single courses. One course did not require a text. One school with five different courses used three different texts, of which two were differing editions of the same text.

Since a course in health education is not now required by the state, it is interesting to review the purposes for presenting such a course. Four instructors did not give a purpose for this course. The remaining seventeen instructors listed a total of twenty-nine purposes (five listed three, two listed two, while ten listed one).

The purposes given by the instructors can be classified in the following four categories:

- (1) Focused upon the needs of the students in the class for their own personal improvement. (Personal Needs);
- (2) Focused upon the needs of the students as future teachers. (Professional Needs);
- (3) Focused upon certification or graduation requirements;
- (4) No specific focus and not in one of the previous categories.

It is noted that none of the courses have purposes focused upon both the personal and professional needs of the student-teachers. One institution provides two required courses, one in Personal Health, whose purpose fell into category 1, and one in School Health Problems, whose purpose was in category 2. The first course is a prerequisite for the second. Another institution also has two required courses whose purposes conveniently divide into categories 1 and 2. These courses are unrelated, since one is a course in personal health while the other is a safety course. The four purposes on certification needs came from instructors at the same school.

In this group of fourteen institutions, three of the schools required this course for all students. Only one of the three schools

had a purpose in line with this requirement. Of the 16 courses required for all teachers, seven gave twelve purposes in category 1 and five gave six purposes in category 2. These were not the same courses.

The instructor was next requested to list the aims and objectives for the course. Of the 21 instructors queried, eight did not list items under this question, while the remaining thirteen listed 51 items. One instructor gave fourteen objectives and another had seven. Neither of these instructors gave a purpose under the previous question.

In reviewing the 51 statements of objectives it seemed convenient to separate them into three categories:

- I. Those statements which indicate the provision of personal information for the student and which provide a learning area focused upon the individual.
- II. Those statements which indicate a desire to change activities and behavior of the individual.
- III. Those statements which indicate a desire to enlarge the knowledge of the individual regarding community health.

Twenty-five objectives were found in category I, 14 in category II, and 12 in category III. Five courses had objectives in all three categories, two had objectives in two categories (I and III) while the remainder limited their objectives to one category.

In an attempt to determine the breadth of the instructor's information and how much teaching was done by example, each instructor was asked to indicate the source and types of teaching aids used in the course under consideration. By teaching aids, the committee was referring to films, pamphlets, and film strips which were not a part of the course requirement. While two instructors did not use teaching aids, two others used only one teaching aid for the course, and two more stated that they did not use teaching aids routinely. Sixteen sources for teaching aids were given by the instructors. Films were obtained from twelve of the sixteen sources, while pamphlets were



received from eleven. The largest number of teaching aids were obtained from the State Department of Health, the Nebraska Heart Association, and the Nebraska Division, American Cancer Society. The distribution of the number of sources used varied from zero to nine.

In the institution where both a Personal Health and School Health Course are required, visual aids are used in the Personal Health Course as an aid to the student-teacher. The instructor then has a unit in the School Health Course on the source and use of Audio-Visual Materials.

Methods of class presentation, especially the use of guest lectures and field trips, are also of importance in determining the experience and knowledge of the instructor in the course. As was expected, all instructors used the lecture as the primary method of imparting information. Guest lectures were used in 13 of the 21 courses. Of the six courses for which specific information was listed, two listed the guest participants by subject, while the other four listed them by professional training.

Questions regarding the use of outside readings, student projects and types of examinations were asked of the instructor to determine methods of student evaluation, as well as to determine how broad an experience was expected of the student.

Instructors in eight (of 21) courses do not require further readings. Five require outside readings, but do not provide a specific bibliography. Four of the remaining eight courses which provided a bibliography list *Today's Health*, a magazine published by the American Medical Association, as a major reference. One instructor required abstracts of current articles from the bibliography. Another instructor referred the student to the *Reader's Guide to Periodical Literature* for the student's selection. Students in three of the courses were provided book lists only for reference material. One instructor requires summaries of reading material as student class reports.

In seven of the courses, projects of varying types were required. These include:

- (1) maintenance of a health bulletin board,
- (2) dietary analysis, (3) case studies in mental health, (4) development of a physical fitness program, (5) preparation of an emergency health flip chart, (6) an original play, (7) development of an idea file, (8) survey of environment for safety factors, (9) preparation of notebooks and scrapbooks, and (10) organization and presentation of lesson plans.

In addition, term papers were required in six courses. Two courses required both a term paper and a project. Topics were provided in a few courses, while in others, the students were allowed a free choice.

Seventeen courses are concluded with a final examination. Three of the four instructors who do not give a final examination give unit examinations which become final for that particular section or unit. Students in the remaining courses are graded on the basis of frequent short examinations and class participation.

Eleven instructors use the frequent short test as one evaluation tool, fifteen use assigned tests, five use student participation, two use attendance, and one instructor has an examination which the student may complete outside of class. An instructor's requirement for reports, projects, outside reading and presentation of papers has not been included as student participation.

With regard to the four evaluation tools specifically mentioned (final examination, frequent short tests, assigned tests, and student participation in class) five instructors used only one item, nine used two, four used three and three used all four.

In determining the subject matter to be included in each course, fourteen instructors followed the text outline, either exclusively or in combination with another method (own experience, source other than text, student requests). Thirteen chose to use personal experience in developing the course, either personal experience alone or in combination with one of the other methods. Only four relied solely on personal experience. Only three gave any recognition to the needs of

the students, and these were modified with other methods.

Seven of the instructors prepared a mimeographed outline of the course for the students. Of the six instructors who used other sources and their own experience for subject matter, only three prepared such an outline. From this source, we are able to check only nine of the twenty-one (eliminating the duplications) course outlines for subject matter. A course outline was not provided for four of the courses which did not use the text outline.

The subject with the highest frequency of mention in the survey of topics treated was Communicable Disease Control (19 of 21 courses) followed closely by Mental Hygiene, Nutrition, Personal Hygiene (exercise, rest, and sleep), Alcoholism, and Dental Health (in 18 of 21 courses). The subjects least often mentioned were Welfare Programs and Public Health Nursing (in 5 of 21 courses), Laboratory Services (in 3 of 21 courses), and Social Security (in 2 of 21 courses).

The Committee prepared a list of five general subject areas which it believed should be included in a curriculum in health education for teachers. These were (1) Personal Health, (2) Community Health, (3) School Health, (4) Community Health Organization, and (5) Methods.

The twenty-six subjects with the highest frequency tally in the survey were related primarily to personal health. Those subjects mentioned the least frequently were related to Community Health Organization and School Health. Subjects related specifically to school health were discussed in fewer than fifty per cent of the courses.

One of the latest published surveys of courses in health education was done by Staton and Edwards.<sup>5</sup> It consisted of information on a random sample of two and four year colleges. From their survey 22 per cent of total samples, both two and four year schools, required a health course for all students. In this survey, only three of the twenty (15%) colleges require the course in health education for all students. In spite

of the stated requirement of this course for teachers, only two of the courses are focused upon school health problems as such. The remaining courses have been designed primarily to teach personal health and hygiene to the student-teachers. This is certainly a necessary item of instruction, but it cannot be considered to go far enough. It matters little whether the course or courses are in the department of education or physical education. The important thing is that the instructor of these courses must be well prepared himself with the knowledge which he is trying to impart to the students, and believe that knowledge and appreciation of sound health principles constitute a necessary component of life that the prospective teacher must adopt and practice.

It is doubtful if a single three hour course could provide the minimum material that the Committee would hope to find in a curriculum in health education. It is recommended that the curriculum consist of a minimum of two courses with at least three credit hours each. The first course should be one on Personal and Community Health, focused upon: (1) the personal needs of the teacher; (2) improving the health of the teacher; and, (3) increasing the teacher's knowledge of community health. The second course could be concerned with methodology in health education. There is evidence to show that, without a course in personal health, students are ill-prepared to understand and accept information in advanced courses in health education.

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# Neurologic Manifestations of Hypoxia

## SECOND INSTALLMENT

(Continued from January, 1965)

### DELAYED POSTHYPOXIC ENCEPHALOPATHY<sup>22</sup>

Neurologic deficits are sometimes delayed for days or weeks after apparent recovery from hypoxia. In the interim the patient appears well and betrays no clinical hints that critical changes are imminent. Although not a common occurrence, this appears in a small per cent of patients with hypoxia serious enough to require medical attention. Most reports of this phenomenon are concerned with CO intoxication, possibly because CO intoxication is common and because of its ability to provoke severe, prolonged, sublethal hypoxia. However, delayed posthypoxic encephalopathy may occur after *any* form of hypoxia. Principal features are:

Severe hypoxia (patient was usually comatose, then recovered).

Patient resumes full activity in 4-5 days.

Two to 10 day (occasionally 2-4 weeks) remission then.

Abrupt recurrence of organic mental syndrome, progressing then to neurologic deterioration, coma.

Process may become arrested at any stage.

Patients may recover well, recover with sequelae, or die.

No clinical signs which would predict this group (EEG?).

Often confused with psychiatric disorder.

Etiology unknown.

Possible relationship to increased activity, exertion. Avoidance of this through dangerous period may be prophylactic.

### PHYSIOLOGIC PHENOMENA OF CEREBRAL HYPOXIA

From the standpoint of simple or complex disturbances, one notes a range from:

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1. Simple hypoxia: Respiratory exchange of CO<sub>2</sub> is not greatly impaired.
2. Asphyxia: Hypoxia plus CO<sub>2</sub> retention occur together.
3. Circulatory standstill: Hypoxia progressing to anoxia; CO<sub>2</sub> retention, accumulation of metabolic wastes and possibly even hypoglycemia occur without movement of column of blood.

The opportunities for neuronal damage are much greater in circulatory standstill. Whether both carotid arteries are compressed or an atmosphere devoid of oxygen is breathed, unconsciousness appears in 8-10 seconds usually. With such anoxia for 12 seconds duration only, consciousness and legible handwriting return in 1-8 minutes following carotid compression, in approximately 20 seconds following anoxic inhalation.<sup>22x</sup> With a Stokes-Adams attack and electrical silence in EEG tracing, one ventricular contraction may restore some EEG activity if only briefly.<sup>22a</sup>

A similar degree of hypoxia occurring during CO intoxication as during cardiac arrest (or hanging) is often incompatible with survival as CO is removed from blood only slowly.

A number of secondary physiologic defects (as well as structural alterations, to be enumerated later) may accompany or be set off by hypoxia, including:

- Cardiac arrhythmias
- Cardiac arrest
- Metabolic acidosis
- Hyperventilation
- CO<sub>2</sub> retention
- Grand mal convulsions
- Hypotension
- Apnea
- Laryngospasm
- Injudicious chemotherapies

### EEG correlates

In rapid, critical hypoxia, not allowing



time for physiologic adjustment, the following not completely precise stages occur:<sup>23</sup>

1. Appearance of slower rhythms with some increase in amplitude. Photic driving lost at end of this stage.  
This stage appears often in five seconds when induced by asystole. Objective clinical signs are absent or minimal.
2. Sinusoidal delta waves appear in bursts, become prominent in frontal regions: Large amplitude, synchronous, symmetrical. Arterial oxygen saturation often 65-80 per cent at this time. This stage commonly appears in 10 seconds after induced by asystole.  
Eyes become fixed.  
Clouding of consciousness, confusion, amnesia.
3. Delta rhythms become slower, less regular, less frequent. Modulation disappears. Amplitude gradually decreases. Arterial oxygen saturation usually 50-65 per cent at this time. Coma, convulsive syncope.
4. Flat line. Arterial oxygen saturation often at or below 50 per cent at this time. This stage may appear 18-20 seconds after asystole. Tonic spasm, opisthotonos, decerebrate signs, deep coma.

In the hypoxia of chronic pulmonary insufficiency and chronic heart disease, EEG manifestations are often absent due to physiologic adaptation. Even among infants with congenital heart defects (cyanotic), EEG correlates with hypoxia do not appear (although it may be noteworthy that hyper-ventilation produces no EEG changes in these patients).<sup>24-27</sup> Correlations among a group of patients with hypoxic heart disease of many types suggest that only with a compounding of physiologic defects (chronic hypoxia, acute hypoxemic crisis, reduced cardiac output, hypotension, poor venous return, erythrocytosis) will EEG abnormalities appear. (It should be recalled here that EEG defects in congenital heart disease may be associated also with structural cerebral changes as deformity, infarction, abscess, telangiectasia).

Hypoxia will often activate epileptic discharges in the epileptic patient's EEG.<sup>28</sup>

#### Clinical correlates

With hypoxia not progressing beyond stage three, a rapid return to normal EEG tracing usually occurs.

With cardiac asystole, EEG tracing becomes flat in 20 seconds. At hypothermia

of 14° C, cardiac arrest may be endured 1 or 2 hours before EEG silence appears.<sup>29</sup>

Under general anesthesia, EEG is less valuable to monitor hypoxia because diagnostic changes are mimicked and obscured by anesthesia. Only when oxygen saturation drops to a critically low value do recognizable EEG features of hypoxia appear.

With cardiac arrest or hanging, EEG tracing may become normal soon after clinical recovery if unconsciousness does not exceed 14 hours. In patients under 50 years of age, the maximal duration of unconsciousness following cardiac arrest (or hanging) compatible with complete clinical recovery is 48 hours.<sup>30</sup>

With CO intoxication, EEG tracing becomes normal soon after clinical recovery if unconsciousness does not exceed five hours. In patients under 50 years of age, maximal duration of unconsciousness following CO intoxication compatible with complete clinical recovery is 20 hours (11 hours in patients over age 60).

With longer states of unconsciousness, EEG abnormalities persist even with return of consciousness. Some EEG's will become normal eventually despite incomplete clinical recovery; others retain EEG abnormality where apparent complete clinical recovery ensues.

With a markedly abnormal EEG shortly after CO intoxication, 15 per cent of patients recover fully, 40 per cent die.

With a normal or near normal EEG shortly after CO intoxication, 60 per cent recover fully, none die.

Abnormal EEG persisting over 1 week correlates with sequelae.

Prolonged EEG silence (flat tracing) often indicates poor prognosis. If fast EEG activity returns within an hour after removal from hypoxia, a better prognosis is suggested. Appearance of minute (5 microvolt), fast (50 cycle) spiking activity on a flat tracing is a grave EEG sign.<sup>31</sup>

Serial EEG's are of general prognostic value. In favorable cases, tracings return to

normal in a week. Deteriorating delta waves and tendency toward a flat curve are of grave significance.

In heart surgery with total cerebral arterial occlusion, the time required for EEG recovery after EEG silence is directly related to the duration of EEG silence and the temperature of the patient (hypothermia forestalls or shortens EEG silence).

### Other clinical correlates

Duration of unconsciousness usually varies directly with gravity of prognosis.

Grave prognostic signs:

Persistently fixed, dilated pupils

Persisting generalized body rigidity, decerebrate signs

Prolonged and intractable hypotension

Prolonged absence of spontaneous respiration

Temperature elevation; leucocyte count over 18,000

Breathing seven per cent oxygen for four minutes is usually well tolerated by healthy persons. In patients with severe cerebrovascular disease, this is poorly tolerated and EEG abnormalities appear soon.<sup>32</sup>

### **PATHOLOGY**<sup>22x, 33</sup>

Two cellular elements appear critically affected by hypoxia in the nervous system, neurones and vascular (particularly capillary) endothelium. Several generalizations appear tenable in outline form:

1. If the patient recovers, neuronal and vascular changes were mostly not severe and were largely reversible.
2. If the patient recovers with sequelae, cerebral neurones and vascular endothelium were permanently damaged, in significant amounts and sites.
3. If the patient dies, brainstem neurones and vascular endothelium were sufficiently damaged that life could not be sustained.

Cerebral neurones have a tolerance for hypoxia — up to a point. They possibly may survive for an extended period with their metabolism reduced to 15-20 per cent. This tolerance appears to vary however; apparently only four minutes of *anoxia* is the maximum tolerated by certain cerebral groups of neurones, following which necrosis occurs. In medullary and spinal centers this tolerance appears greater.

Beyond a certain severity and duration of hypoxia, wherein complete recovery is still possible, the brink is steep however, for only a few survive then, these with sequelae (largely cerebral).

While severity, duration and rapidity of onset of hypoxia are important, body temperature, age, other debility and *secondary alterations* fired off by hypoxia often tip the balance or contribute to vicious cycles. Several of these were listed above in discussion of *physiology* (most critical of which are cardiac arrest and apnea).

Of *secondary structural* changes, the following are not unusual consequences of hypoxia:

Cerebral edema

Cerebral thrombosis, hemorrhage (small vessels usually)

Pulmonary edema; atelectasis

Myocardial failure<sup>34</sup>

Uremia (renal tubular necrosis)<sup>35, 36</sup>

Muscle necrosis (myoglobinuria and hyperkalemia may occur then).<sup>35</sup>

Liver cell necrosis<sup>36x</sup>

Hazards of body position in coma; may compromise respiration, circulation.

Peripheral nerve compression. Ischemic limb changes.

Aspiration of food, vomitus.

Injury in fall: hemorrhage; neck, craniocerebral, thoracic injury.

Injury incurred in resuscitative measures.

The fundamental vascular changes of hypoxia appear to be these:

Endothelial swelling, proliferation

Dilatation, congestion

Diapedesis

Capillaries outstandingly involved

In patients dying within a few hours, lesions often remain biochemical with few structural changes demonstrable. Extent of neuropathologic findings increases with severity of hypoxia and duration of life subsequently.

In patients dying within a day or two:

Congested capillaries, arterioles

Edema, petechial hemorrhages

These in cerebral white matter, pia-arachnoid

Early neuronal changes in laminae III, V, VI (in depths of sulci) of motor, frontal or visual cortex.



Similar early neuronal changes in corpus striatum, globus pallidus, Purkinje cells of cerebellum, hippocampus or thalamus.

Among patients dying after several days or more:

More outstanding neuronal changes in sites listed above.

More, if not most, of above sites involved.

Patchy areas of ischemic softening.

Strips of neuronal necrosis may be prominent.

Early gliosis and demyelination.

Patients who die later disclose:

Gross neuronal loss in sites listed above.

Gliotic scars.

Patchy demyelination (sometimes prominent).

Severe CO intoxication almost invariably features outstanding necrosis of globus pallidus. Cardiac arrest (ischemic hypoxia) usually discloses predominant cortical destruction. In individual cases, however, there are many unexplained variants in microscopic sites of damage. In some specimens, too, hemorrhages or infarctions may be more in evidence than usual. Perhaps these "atypical" findings are due to the many variables of etiology and pathogenesis, including also:

Capillary and venous stasis

Vascular anomalies and variants

Cerebral edema

Vasomotor disturbances?

Position of head, body during coma

Increased cerebral (neuronal and vascular) activity at critical period: excitement, convulsion.

### Delayed posthypoxic encephalopathy

Extensive cerebral hemispheric demyelination has been reported as an outstanding finding in these patients.<sup>22</sup>

## HYPERCAPNIA

Also known as hypercarbia, respiratory acidosis, and CO<sub>2</sub> narcosis, hypercapnia designates CO<sub>2</sub> retention due to impaired respiratory exchange. It may develop in many situations where hypoxia occurs. It may be quantitatively estimated from blood (particularly arterial) CO<sub>2</sub> determination, blood pH and air expired forcefully following a normal expiration. Arterial CO<sub>2</sub> over 50 mm Hg occurs with ventilatory failure.<sup>36y</sup>

In patients whose respiratory exchange is grossly and acutely affected, hypoxia is

more damaging than CO<sub>2</sub> retention. It appears likely, however, that hypoxia plus CO<sub>2</sub> retention may be more disturbing than hypoxia alone.

In subacute or chronic respiratory failure (insufficiency, hypoventilation), CO<sub>2</sub> retention develops slowly; adaptation occurs. Respiratory centers become less sensitive to increased CO<sub>2</sub> in blood. Hypoxia may lag in its appearance, to become clinically important after CO<sub>2</sub> retention is well established. The clinical picture of CO<sub>2</sub> retention is well known and it is combined progressively with hypoxia. Lethargy, confusion, stupor (with or without cyanosis) appear with it. In the more chronic forms, convulsion, focal cerebral deficits and even papilledema may occur.

With the patient's central responses to CO<sub>2</sub> dulled, the simple administration of oxygen satisfies centers stimulated by oxygen lack. Apnea follows. CO<sub>2</sub> retention must be recognized, its causes treated and respiratory exchange improved (mechanically if need be) to dispel excess CO<sub>2</sub>.

Chronic hypercapnia *per se* does not appear to cause permanent neuronal damage. However, it may mask underlying cerebral damage due to hypoxia, the latter damage becoming apparent as the patient recovers from respiratory insufficiency.<sup>36a</sup> Study of one group of patients suggests that too great and rapid conversion from chronic hypercapnia (with its concomitant dilatation of small cerebral vessels and more facile release of oxygen from acidotic blood) to hypocapnia (with cerebral vasoconstriction and shifting oxygen dissociation curve) may be hazardous particularly in older age groups.

## TREATMENT

In general, treatment is directed toward:

Correction of etiologic and contributory factors.

Providing adequate oxygen.

Maintaining an open, clear airway.

Support of—

Respiratory functions

Heart and blood pressure

Medullary centers

(Occasionally renal function)

In acute, critical hypoxia the following additional considerations appear useful:<sup>37</sup>



Hyperbaric oxygen

Hypothermia

Transfusion (even exchange transfusion) with oxygenated blood.

Reduction of cerebral edema

(End of second installment; to be continued).

## Part II

### SPECIAL FORMS OF HYPOXIA

CO intoxication

Anesthesia

Cardiac arrest

Altitude

Perinatal hypoxia

Breath-holding (infants)

Drowning

Methemoglobinemia

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"Each year some forty thousand Americans step into their automobiles little realizing this is to be their last ride. In spite of all the increased safety measures, another thirty thousand persons are killed in accidents at home, when all thought of death is far from their minds. For death stalks mankind relentlessly, and although medical science and safety engineers wage a constant war against it, in the end, death is always the victor." (Billy Graham: Peace With God, p. 67).

## Coming Meetings

### CRIPPLED CHILDREN'S CLINICS—

March 6 — North Platte, Adams Junior High School

March 20—Ainsworth, Elementary Grade School

April 3—Broken Bow, Elks Club

April 10—Alliance, Central High School Building

April 24—McCook, St. Catherine's Hospital

ELEVENTH ANNUAL JOINT SECTIONAL MEETING, American College of Surgeons and Nurses — Seattle, March 8-11, 1965. For details contact Dr. James H. Spencer, 55 East Erie St., Chicago 60611.

NATIONAL MEDICOLEGAL SYMPOSIUM — Sponsored by AMA and ABA, Las Vegas, The Dunes Hotel, March 11-13, 1965. Advance registration with fee, \$25. Info: Robert R. Throckmorton, General Counsel AMA, 535 North Dearborn Street, Chicago 60610.

17TH ANNUAL TEACHING SEMINAR— At the Jung Hotel, New Orleans, March 13th through 18th, 1965.

AMERICAN COLLEGE OF PHYSICIANS —Golden Anniversary Meeting, Chicago; Conrad Hilton Hotel, March 22-26, 1965.

12TH ANNUAL MEETING OF THE MID-CENTRAL STATES ORTHOPAEDIC SOCIETY — March 25-27, 1965, at the Velda Rose Towers, Hot Springs, Arkansas.

AMERICAN SOCIETY FOR THE STUDY OF STERILITY — Annual Meeting; San Francisco, Jack Tar Hotel; April 2, 3, and 4, 1965. Info: William H. Robertson, 2700 Tenth Avenue South, Birmingham, Alabama 35205.

ACOG ANNUAL CLINICAL MEETING — The American College of Obstetricians and Gynecologists will hold its 13th Annual Clinical Meeting, Sunday-Thursday, April 4-8, 1965, at the Civic Auditorium in San Francisco.

AMERICAN INDUSTRIAL HEALTH CONFERENCE — April 5-8, 1965; American Hotel, Bal Harbour, Miami Beach, Florida, Industrial Health Conference, 55 East Washington Street, Chicago, Ill. 60602.

GILL MEMORIAL EYE, EAR AND THROAT HOSPITAL — Thirty-eighth Annual Spring Congress, Roanoke, Virginia, April 5 through 8, 1965, at the hospital.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS — Interim meeting; Dallas, Texas; April 21-25, 1965.

AMA SECOND ANNUAL CONGRESS ON ENVIRONMENTAL HEALTH — Drake Hotel, Chicago, April 26-27, 1965.

AEROSPACE MEDICAL ASSOCIATION — 36th Annual Scientific Meeting; April 26-29, 1965; New York Hilton Hotel, New York. Info: William J. Kennard, MD, Aerospace Medical Association, Washington National Airport, Washington, D.C. 20001.

THE 14TH HAHNEMANN SYMPOSIUM titled "Mechanisms and Therapy of Cardiac Arrhythmias" will be held at the Sheraton Hotel, Philadelphia, April 26-29, 1965. Contact Leonard Dreifus, MD, Program Director, Hahnemann Medical College and Hospital, 230 North Broad Street, Philadelphia 19102.

AMERICAN ACADEMY OF PEDIATRICS —Spring Session; April 26-29, 1965; Americana Hotel, Bal Harbour, Florida. Info: American Academy of Pediatrics, 1801 Hinman Avenue, Evanston, Illinois 60204.

PUBLIC HEALTH AND MEDICAL, CHEMICAL AND BIOLOGICAL DEFENSE COURSE — To be given at the U. S. Army Chemical School at Fort McClellan, Alabama, on April 26-30, 1965.

NINTH POSTGRADUATE COURSE IN TRAUMA — Sponsored by Chicago Committee on Trauma, ACS; April 28, 29, 30,

1965; John B. Murphy Memorial Auditorium, 50 East Erie Street, Chicago 60611.

**SOUTHWEST SURGICAL CONGRESS** — Hot Springs, Arkansas, May 10-13, 1965, Velda Rose Towers Motel.

**NEBRASKA HEART ASSOCIATION** — With Nebraska State Health Department; Scientific Session, Omaha, May 16, 1965. Info: Nebraska Heart Association.

**METABOLIC DEFECTS** — The Fifth Annual Postgraduate Seminar of Childrens Memorial Hospital, Omaha, will be held on Friday, May 21, 1965. Guest speakers will be Victor H. Averbach, PhD, and Angelo M. Di George, MD. Further information can be obtained by writing to Carol R. Angle, MD, Childrens Memorial Hospital, Omaha, Nebraska 68105.

**AMERICAN CANCER SOCIETY** — 1965 Scientific Session — Drake Hotel, Philadelphia, June 16, 1965. Info: Director of Professional Education, American Cancer Society, 219 East 42nd Street, New York 10017.

**THE ANNUAL MEETING OF THE AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION** — Will be held on August 22-27, 1965, at the Sheraton Hotel, in Philadelphia.

**FIRST NATIONAL CONFERENCE ON AREAWIDE HEALTH FACILITIES PLANNING, AMA** — Americana Hotel, Bal Harbour, Florida, November 28-29, 1964.

Future Meetings of the American College of Surgeons—

**SEATTLE, WASHINGTON**, March 8-11. Annual 4-Day Sectional Meeting for Doctors and Graduate Nurses. Olympic Hotel and nearby hotels. Dr. Edward B. Speir, Local Chairman for surgeons' program. Elizabeth Giblin, RN, Local Chairman for nurses' program.

**ANNUAL CLINICAL CONGRESS**, October 18-22, 1965, Atlantic City, New Jersey.

— 1966 —

**BAL HARBOUR, FLORIDA**, January 13-15. Sectional Meeting. Americana Hotel.

**HOUSTON, TEXAS**, January 31 - February 2. Sectional Meeting. Sheraton-Lincoln Hotel.

**CLEVELAND, OHIO**, March 14-17. Annual 4-Day Sectional Meeting for Doctors and Graduate Nurses. Sheraton-Cleveland and nearby hotels.

**ANNUAL CLINICAL CONGRESS**, October 10-14, 1966. San Francisco, California.

For any advance information address: Secretary, American College of Surgeons, 55 East Erie Street, Chicago, Illinois 60611.

**THE HAHNEMAN MEDICAL COLLEGE AND HOSPITAL** of Philadelphia offers the following Postgraduate Education Courses during 1965 and 1966:

—April 26-29, 1965: 14th Hahneman Symposium on Mechanics and Therapy of Cardiac Arrhythmias; Dr. Leonard Dreifus; Sheraton Hotel, Philadelphia.

—July 26-30, 1965: Interpretation and Therapy of Cardiac Arrhythmias; Dr. Dreifus; Hahneman CVI Building.

—November 22-24, 1965; 15th Hahneman Symposium Cancer Chemotherapy; Dr. Isadore Brodsky; Sheraton Hotel.

—December 8-10, 1965: A Hahneman Symposium on New Concepts in Gynecological Oncology; Dr. George C. Lewis; Sheraton Hotel.

—April 20-23, 1966: 16th Hahneman Symposium, Arterial Occlusive Disease; Dr. Albert N. Brest; Marriott Motor Hotel.

—December, 1966: 17th Hahneman Symposium, Nutritional Dysfunction; Dr. Donald Berkowitz; Sheraton Hotel, Philadelphia.

**ANIMAL CARE PANEL** — 16th Annual Meeting; Sheraton Hotel, Philadelphia; November 15-19, 1965. Contact Mr. Joseph J. Garvey, Executive Secretary, 4 East Clinton Street, Joliet, Illinois 60434.



CONTINUING EDUCATION — Closed Chest Resuscitation; University of Nebraska College of Medicine, at Eppley Research Institute, March 8, 1966 (for physicians, 9th for dentists, and 10th for nurses). Info: Continuing Education, University of Nebraska College of Medicine, 42nd and Dewey, Omaha 5.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS — "Vision for the Space Age;" Houston, Texas, Rice Hotel, March 24-26, 1966. Info: Director of Information John D. Coleman, 16 East 40th Street, New York 10016.

#### Test of Performance of Blue Shield—

Blue Shield pays 89 per cent of the cost of doctors' services for members possessing its best group certificate according to a survey recently completed by the National Association of Blue Shield Plans, Chicago, Illinois, coordinator of Blue Shield Plans in the United States, Canada, Puerto Rico, and Jamaica.

The Test of Performance Survey, the largest single study in the history of medical economics, showed Blue Shield's best group certificate, held by one out of four members, pays 90 per cent of medical care costs, 89 per cent of surgical costs, and 88 per cent of anesthesia costs.

Blue Shield, according to the survey, pays 82 per cent of members' costs in its most widely held group certificate, which accounted for 40 per cent of the claims surveyed. For all claims analyzed in the study, including all levels of individual and group contracts, Blue Shield pays 77 per cent of members' costs.

The survey was taken to determine how well Blue Shield Plans perform in covering the costs of doctors' services for members. Fifty-four United States Blue Shield Plans, with an enrollment of nearly 42 million, participated in the survey. These Plans account for 83 per cent of Blue Shield's United States' membership.

The survey was limited to a sample of physician services in the areas of surgery, anesthesia, medical, and maternity. These

areas account for about 89 per cent of the money paid by the Plans that participated in the survey, the only one of its kind ever held.

Over 470,000 questionnaires, selected in a scientifically drawn sample, were sent to physicians during a recent six-week period inquiring about their charges and Blue Shield's payments for selected services. Physicians returned better than 370,000 questionnaires, a response of nearly 80 per cent.

## Medicare in Operation

#### Basis for Payment for Obstetrical Care—

When a physician has rendered prenatal care for a minimum of 29 weeks, he is entitled to Medicare payment under *Code 4821* of the Medicare Manual and Schedule of Procedures. This payment is for the entire obstetrical care including delivery, and complete pre and post partum care. When the patient is treated for less than 29 weeks, Medicare benefits are paid under *Code 4829* for the delivery and *4830*, complete history and physical examination, and *4831* for the antepartum visits. The allowance for these antepartum visits is based on trimester calculation: the first 14 weeks of pregnancy are considered the first trimester, and a maximum of *two* visits is authorized for this period; the second trimester includes the following 13 weeks and a maximum of *three* visits is authorized; the third and final trimester consists of the remaining weeks until delivery and *four* visits are authorized.

If, however, a doctor does not see a patient until the third trimester, he may bill for an additional visit which includes a complete physical examination (*Code 4830*); this makes a maximum of *five* visits during the third trimester.

A physician may also bill for any laboratory services rendered in his office, but if rendered by a laboratory directed by a physician, these laboratories are authorized to bill direct to the Fiscal Administrator.

All post partum care is considered to be included in the delivery fee.

Treatment for complications that arise during the pregnancy both pre and post partum is also authorized by Medicare. Consultations are also authorized during the pregnancy, but only one such consultation is allowed.

When a Caesarean operation is performed, the physician is allowed payment for the surgery plus payment for the antepartum care.

### **AMA ELDERCARE PROGRAM**

First announced on January 9 by AMA President Donovan F. Ward, at the Association's Kerr-Mills Conference in Chicago, the AMA Eldercare Program would encourage the use of voluntary health insurance or prepayment plans in the implementation of Kerr-Mills programs, permit the state to have a health-oriented agency supervise or administer the program, provide for use of an income information statement as the sole eligibility test of need, and provide for a wide spectrum of medical, surgical and hospital benefits with sliding-scale eligibility so that a citizen 65 and over would pay all, part or none of the cost of the insurance or prepayment policy, depending on his income.

#### **The Eldercare Bill**

These principles are incorporated in the Eldercare Act of 1965, introduced on January 27 by Representatives A. Sydney Herlong, Jr., (D., Fla.) and Thomas B. Curtis (R., Mo.), amending the Kerr-Mills law to authorize broad health insurance coverage for elderly persons.

The Herlong-Curtis bill would authorize federal grants to the states on a matching basis to help persons 65 years of age and older pay the costs of the health insurance or prepayment policy if they could not afford it otherwise. The bill would provide for utilization of Blue Shield and Blue Cross plans and private health insurance companies.

The cost of such coverage would be borne entirely by government for those elderly individuals whose income falls below limits set by each state. For individuals with incomes

between the minimum and a maximum, government would pay a part of the cost on a sliding scale according to income. Individuals with income above the maximum would pay the entire cost, but they would have the benefits of an income tax deduction for such payments.

Persons under 65 years of age also would be given an income tax deduction for the amount of premiums paid on health insurance policies for elderly relatives.

### **STANDARD NOMENCLATURE OF SPORTS INJURIES**

**Prepared by Committee on the Medical Aspects of Sports**

To gain a more accurate picture of nature, rate, and cause of sports injuries so that effective preventive measures can be determined, the development of a standard nomenclature of sports injuries has been undertaken by the American Medical Association. A Subcommittee on Classification of Sports Injuries has been appointed by the Board of Trustees for this purpose at the request of the AMA Committee on the Medical Aspects of Sports. Available statistics do not necessarily depict valid information since injuries in the athletic setting generally are not classified in a meaningful and uniformly understood manner.

The nomenclature is to be restricted to those illnesses and injuries that have special significance in athletics. It is intended for functional and instructional use by physicians, coaches, and trainers, as well as researchers and insurance carriers. Training room terms such as "charley horse" and "hip pointer" will not be discarded but will be related to, and serve as synonyms for, medical entities. Terms such as "shin splints" and "concussion" which are not definitive will receive special attention. Cross reference will permit easy entry to the nomenclature with either medical or athletic terminology.

The information is to be classified by anatomical region, pathology, and degree of severity, and coded for precise and nationally uniform reporting and analysis. Where indicated (e.g., problems of mental, derma-



tological, or environmental origin), additional appropriate classification will be devised.

The first progress report will be available by April 1965, according to Alexius Rachun, MD, Chairman, of Ithaca, New York. The other members of the Subcommittee are Fred L. Allman, Jr., MD, Atlanta, Georgia; Martin E. Blazina, MD, Los Angeles, California; Donald L. Cooper, MD, Stillwater, Oklahoma; Richard C. Schneider, MD, Ann Arbor, Michigan.

## Announcements

### One Day Seminar in Diseases of the Nervous System; Clinical and Pathological Considerations—

Will be held April 3, 1965 at St. Louis, Missouri. Sponsored by the Missouri Society of Pathologists. Conducted by: John J. Kepes, MD, Associate Professor of Pathology and Neuropathologist, Kansas University Medical Center, and Dewey K. Ziegler, MD, Professor of Medicine (Neurology), Kansas University Medical Center.

For advance registration, including slides and case abstracts, send check for \$10.00 to: James G. Bridgens, MD, Secretary, Missouri Society of Pathologists, St. Joseph's Hospital, Linwood at Prospect, Kansas City, Missouri 64108.

Abstracts only, without slides—\$2.00.

### Seminar on Diseases Common to Animals and Men—

The Annual West North-Central Inter-professional Seminar on Diseases Common Animals and Man will meet at the University Hospital in Iowa City, Ia., on Sept. 16-17, 1965. The meeting is being sponsored by the College of Medicine of the University of Iowa, the Iowa State Department of Health, the College of Veterinarian Medicine of Iowa State University, and the U.S. Public Health Service.

The first day of the meeting will concentrate particularly on diseases of children. The speakers include physicians and veterinarians from the states of Iowa, North and South Dakota, Nebraska, Kansas, Missouri

and Minnesota. Further details of the program may be obtained from Dr. William F. McCulloch, Institute of Agricultural Medicine, University of Iowa, Iowa City.

### Compendium of International Scientific Meetings and Correlated Travel Arrangements Now Available to the Physician—

In response to consistent requests from busy physicians all over the United States for information pertaining to medical meetings abroad, Lee Kirkland, President of Group Travel Services, Inc., who for over 15 years has handled travel arrangements for thousands of doctors and their wives to all corners of the earth, recently announced a completely new and unique service — Medical Meetings International.

Medical Meetings International is a conspectus of distinguished world-wide scientific meetings with corresponding travel arrangements which make it possible for the physician to combine attendance at such meetings with the pleasures of travel abroad. Attendance at these notable assemblies offers the physician an unusual opportunity to obtain current information on important new advances in medicine, and to combine research with relaxation in such meeting locales as Europe . . . the Orient . . . or Hawaii.

Medical Meetings International travel arrangements are tailored to the preferences of the physician and provide for superior accommodations, attractive, well-planned itineraries and the services of experienced personnel throughout to attend to every travel detail.

Further information, copies of an up-to-date brochure and reservations may be obtained by contacting Lee Kirkland, Medical Meetings International, Broadway at Thirty-fourth Street, Kansas City, Missouri 64111.

## News and Views

### Kerr-Mills and Independent Business Proprietors—

Apparently the nation's independent business proprietors believe that the Kerr-Mills Act which provides for joint Federal-State



programs to provide medical care for the indigent aged is the most feasible way to handle the problem.

This attitude seems to be reflected in a just recently completed poll by the National Federation of Independent Business on the issue whether or not the Congress should provide financial aid to retired people who desire to enroll in privately operated medical insurance programs, but lack the means with which to pay the premiums.

The independent businessmen voted against this proposal, which is one of the plans being proposed, by a majority of 68%, with 26% in favor, and 6% undecided.

Previously the businessmen have voted against the medicare plan by a majority of 83%.

"There seems to be some feeling among the independent business proprietors," C. Wilson Harder, president of the Federation, reports, "That before anything else is done, the Kerr-Mills Act should be given an opportunity to fully function in all states to see if this is not only the most humane, but also the most practical way to handle the problem."

#### Nebraskans to Foreign Fields—

New York — Dr. and Mrs. David E. Williams, Syracuse, Nebraska, are among 31 persons who were commissioned for Methodist missionary and deaconess service in the United States and seven other countries January 22 at Buck Hill Falls, Pa.

Dr. and Mrs. Williams will go to West Pakistan, where he will be a medical missionary and she will do educational work.

Born in Hemingford, Nebraska, Dr. Williams attended Nebraska Wesleyan University at Lincoln and graduated in 1954 with a bachelor of arts degree in chemistry. He took medical training at the University of Nebraska College of Medicine in Omaha and received both the master of science degree in physiology and the MD degree. He interned at the Immanuel Hospital in Omaha, Nebraska, and was granted a three-year Fellowship in medicine (1961-64) at the Mayo Clinic in Rochester, Minn.



Dr. David E. Williams

Mrs. David E. Williams

Mrs. Williams is a native of Lincoln and also attended Nebraska Wesleyan University. She received the bachelor of arts degree in sociology in 1955. She has taught in the public schools of Omaha and as a teacher of homebound children for the Special Education Department of the city of Rochester (Minn.). Dr. and Mrs. Williams are members of the First Methodist Church of Rochester.

#### Internists Recommend Improved Medical Library Facilities—

The American College of Physicians (ACP) recently recommended the enactment of a federal law to expand and improve medical library facilities throughout the United States.

The medical organization, which represents 12,400 specialists in internal medicine and related fields, announced its support of bills introduced in both houses of Congress on January 19.

The Senate version (S-597), titled the Medical Library Assistance Act, was introduced by Senator Lister Hill (D., Ala.). Rep. Oren Harris (D., Ark.), introduced the companion legislation (HR-3142) in the House of Representatives.

In announcing the action, Thomas M. Durant, MD, Philadelphia, Pa., ACP President and Professor of Medicine at Temple University, said: "The two bills provide realistic solutions to a growing problem of collecting and retaining information vitally important to the present and future practice of medicine."

The legislation would embody the following features:

1. Federal assistance in the construction of new medical libraries, and the renovation, expansion or rehabilitation of existing facilities.

2. Assistance in the training of medical librarians and other information specialists in the health sciences.

3. Assistance in the conduct of research and investigations in the field of medical library science and related activities, and in the development of new techniques, systems and equipment for processing, storing and distributing information in the sciences related to health.

4. Financial support to biomedical scientific publications.

#### **BCG Vaccine Available—**

BCG vaccine, a standardized preparation of BCG bacillus in the dry form for use in immunization against tuberculosis, is being made available by Eli Lilly and Company. It is produced by Blaxo Laboratories Ltd., in England.

The vaccine has been used successfully to control tuberculosis in England and other countries for several years. It is prepared from a Glaxo substrain of a Danish strain of BCG bacillus.

#### **Continuing Education Course . . . Pediatrics—**

A continuing education course in "Pediatrics" will be offered to physicians by the University of Nebraska College of Medicine, Omaha, on April 5-6. Three physicians are featured as guest faculty members for the "Pediatrics" course, which will be conducted at the Epley Cancer Institute.

To be conducted by the department of pediatrics at the College of Medicine, the course will be offered in cooperation with the Division of Maternal and Child Health, Nebraska State Health Department.

Guest faculty members are **Robert H. High, MD**, clinical professor of pediatrics at Temple University, Philadelphia, Pa.; **Gerald C. O'Neil, MD**, associate clinical professor of pediatrics at Creighton University

School of Medicine, Omaha; and **Francis Scott Smyth, MD**, professor of pediatrics at the University of California Medical Center, San Francisco.

Sessions that will be presented by Dr. High, who, in addition to his academic appointment, serves as senior attending pediatrician and director of inpatient services at St. Christopher's Hospital for Children in Philadelphia, include "Respiratory Problems in Early Life" and "The Newer Penicillins." Dr. O'Neil will discuss "Disorders of Gamma Globulin."

Dr. Smyth, who is coordinator of the Indonesian Project, will deliver sessions on "Disorders of Bone Metabolism" and "Lessons from World-Wide View of Child Nutrition."

Other sessions to be presented are "Bacterial Meningitis," "Lupus Erythematosus in Childhood," "Current Status of Measles, Polio and Mumps Vaccines," "Recent Advances in Pharmacology," "Viral Encephalitis," "Amino-acidopathies," "Hypoproteinemia," "Idiopathic Hypercalcemia," "Psychological Problems of Gastrointestinal Function" and "Problems of School Adjustment."

Course coordinator is Gordon E. Gibbs, MD, professor and chairman of the department of pediatrics at the University of Nebraska College of Medicine. Moderator for April 5 is George E. Robertson, MD, professor of pediatrics at the College of Medicine; J. Harry Murphy, MD, coordinating consultant in neurology and psychiatry at the College of Medicine and clinical professor emeritus of pediatrics at the Creighton University School of Medicine, will be course moderator for April 6.

Other College of Medicine faculty members scheduled on the program are Richard L. Cohen, MD, associate professor of neurology and psychiatry and chief of Children's Services at the Nebraska Psychiatric Institute; Michael Crofoot, MD, professor of pediatrics; A. Ross McIntyre, MD, professor and chairman of the physiology and pharmacology department; Paul K. Mooring, MD, assistant professor of pediatrics; Byron B. Oberst, MD, assistant professor of pediatrics; Otto G. Rath, MD, instructor in pediatrics; Gilbert C. Schreiner, MD, associate



professor of pediatrics; Dorothy I. Smith, MD, assistant professor of pediatrics; John Thomas, MD, professor of pediatrics and associate of physical medicine and rehabilitation; Robert W. Turner, MD, instructor in pediatrics; and Cecil L. Wittson, MD, dean of the Nebraska College of Medicine.

Fee for the two day course in "Pediatrics" is \$40. Registration is being handled by the Office of Continuing Education, University of Nebraska College of Medicine, Omaha.

## Human Interest Tales

Doctor Stephen W. Carveth has opened his practice in Lincoln.

Doctor and Mrs. Robert Best, Holdrege, left in February for a month's trip to the Orient.

Doctor J. P. Tollman has been appointed Professor of Pathology at the Chiangmai Hospital in Chiangmai, Thailand.

Doctor John W. Smith has begun practicing in Omaha after a two-year tour of duty with the Army, in Germany.

Doctor Warren H. Pearse, Omaha, has been appointed an examiner by the American Board of Obstetrics and Gynecology.

Doctor E. F. Leininger, McCook, was re-elected Chairman of the State Board of Health at the group's January meeting.

Doctor Ralph L. Nicholson, Holdrege, was elected President of the Phelps County Medical Society at the group's January meeting.

Doctor Leon S. McGoogan, Omaha, was appointed to the editorial board of the Pacific Medicine and Surgery Journal in January.

Doctor Beverley T. Mead, Omaha, has been appointed Chairman of the Psychiatry Department at the Creighton University School of Medicine.

Doctor Fay Smith, Imperial, will become the first Professor of General Practice at the University of Nebraska College of Medicine at mid-year.

Doctor Clarence McWhorter, Omaha, has been appointed Chairman of the Department

of Pathology at the University of Nebraska College of Medicine.

Doctor R. F. Sievers, Blair, was elected Grand Presiding Senior of the Phi Chi Medical Fraternity, International, at the organization's convention held in December at New Orleans.

Doctors John Foley and Perry Rigby of the Eppley Research Institute, spoke to the Adams County Medical Society on February 3, on the subject of "A Practical Approach to the Use of Chemotherapeutic Agents in the Management of Neoplasia."

## Deaths

ADAMS — Payson Adams, MD, of Omaha, died December 29, 1964. He was 58 years old. He was a 1930 graduate of the University of Nebraska College of Medicine, where he later became a Professor of Neurology. Dr. Adams was past Chief of Staff of the Methodist Hospital. He was very active in civic affairs.

DENT — Dr. George B. Dent died January 1, 1965 at the age of 96. After receiving his degree from Johns Hopkins University, in 1898, he practiced medicine in North Platte until his retirement in 1945. Dr. Dent was a member of several medical associations and past president of the Lincoln County Medical Association.

DeMAY — Dr. George H. DeMay, 72, died December 20, 1964, in Grand Island. A graduate of the Creighton University School of Medicine in 1917, he practiced medicine in Shelton and Grand Island since 1919. He served in World War I as First Lieutenant and was a member of many medical organizations.

RYDBERG — Dr. Charles A. Rydberg died January 8, 1965, at the age of 89. Born in Sweden, Dr. Rydberg graduated from the University of Nebraska College of Medicine in 1903. With the exception of one year in Kenesaw, Dr. Rydberg practiced medicine in Litchfield since 1903. He was a member of many civic and medical societies and a vice president of the State Bank of Litchfield.



THOMPSON — Dr. Irvin Levi Thompson, 84, of West Point died December 8, 1964. Dr. Thompson graduated from the University of Nebraska College of Medicine in 1908. He practiced in Hyannis, Beemer, then in West Point where he served for 56 years. In 1958 he was honored for his 50 years of work in West Point.

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## In Memoriam

DOCTOR ELMER L. BANTIN

WHEREAS, Elmer W. Bantin, MD, a veteran general practitioner in Omaha for many years, passed away January 10, 1965.

WHEREAS, Doctor Bantin, by his dedicated service to his patients, earned their love, respect and gratitude.

WHEREAS, Doctor Bantin was a well trained and extremely capable physician. He was a great humanitarian as well. He served as President of the Staff of Immanuel Hospital, Associate Professor of Medicine, University of Nebraska School of Medicine, and President of the Omaha-Douglas County Medical Society, founder of the Omaha Clinical Society, he was a long time member of the Boards of Directors of Nebraska Blue Cross and Blue Shield.

WHEREAS, Doctor Bantin made a great contribution to his fellowman by his many activities, truly a great Christian, physician, gentleman and scholar.

THEREFORE, BE IT RESOLVED, that the Nebraska State Medical Association and its members extend to Mrs. Bantin their heartfelt and sincere sympathy and that a copy of the Resolution be placed in the Minutes of the Association and a copy be sent to Mrs. Bantin.

Richard E. Garlinghouse, MD  
President

Horace V. Munger, MD  
Secretary

Nebraska State Medical Association

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## In Memoriam

DOCTOR DONALD B. STEENBURG

WHEREAS, Donald B. Steenburg, MD, of Aurora, Nebraska, an honored and esteemed member of the Medical Profession, passed away on November 29, 1964.

WHEREAS, Doctor Steenburg was a distinguished practitioner of the healing art. He was held in high regard by his fellow physicians, not only on account of his professional attainments, but also on account of his warm and sincere regard for his fellowman's welfare. A Christian gentleman and a scholar.

WHEREAS, he served as President of the Nebraska State Medical Association, was Chairman of the Medical Education Committee of the Nebraska State Medical Association for many years. He made a great contribution to the state by improving the quality of medical education and medical care in Nebraska. He was a member of the Board of Directors of Nebraska Blue Shield and served as its Vice President for many years.

WHEREAS, he served his patients faithfully and well for almost 50 years. He was a leader in his community in both civic and professional activities.

NOW, THEREFORE, BE IT RESOLVED, that the members of the Nebraska State Medical Association extend their sincere sympathy to Mrs. Steenburg in her bereavement. That a copy of this Resolution be spread on the minutes of the Nebraska State Medical Association and a copy be sent to Mrs. D. B. Steenburg.

Richard E. Garlinghouse, MD  
President

Horace V. Munger, MD  
Secretary

Nebraska State Medical Association

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# The Woman's Auxiliary

## Buffalo County—

The Buffalo County Medical Auxiliary chose the Medical Society's Tenth Annual Mid-State Conference in Kearney, November 17th, to serve as the opportunity to invite the state auxiliary president, Mrs. John Brown, III, and the state president-elect, Mrs. Kelley, for a visit. The ladies entertained the state officers at a luncheon, and in the evening the doctors, auxiliary members, and their invited guests heard Mr. Herbert Philbrick, author of "I Led Three Lives."

Buffalo County Auxiliary members are beginning plans for their Annual Spring Tea for the High School Future Nurses Clubs.

## Lancaster County—

The February meeting of the Lancaster County Medical Auxiliary was held at the home of Mrs. K. T. McGinnis with Mrs. Bowen Taylor and Mrs. Harry Shaffer, co-chairmen. After the regular monthly business meeting, conducted by Mrs. Frank Cole, a talk on "Genealogy" was given by a former member of the auxiliary, Mrs. Earl Wiedman.



## Know Your Blue Shield Plan

### Important Information Regarding Diagnostic Hospital Admissions—

Both Nebraska Blue Cross and Blue Shield membership agreements and master contracts state: "‘Eligible Services’ or payments for same shall not include: Services rendered during a hospitalization if the principal medical or other services rendered consist of any or all of the following: medical observation, diagnostic studies, X-ray examinations, laboratory examinations, basal metabolism tests, electrocardiograms, electroencephalograms, routine physical examinations, or definitive therapy for physical rehabilitation."

The administration of this exclusion is

recognized as the most difficult in claim administration. Too tight administration leads to bad physician, hospital and public relations. Loose administration tends to sanction over-utilization and increase rates. Proper determination of whether or not certain cases come under the exclusion is most difficult. This is considered one of the grayest areas in Blue Cross and Blue Shield administration. In recognition of this, the New York Blue Cross Plan and A T & T personnel have agreed upon guide lines for administration of the exclusion which have a trend toward national acceptance and is the best we have seen. Basically the same guide lines have been agreed upon by a Joint Committee of Blue Cross and the Civil Service Commission for the Federal Employee Program. Therefore, both Nebraska Blue Cross and Blue Shield Boards of Directors have adopted those guide lines as follows:

1. The following guide lines have been formulated to assist the Medical Director and Benefits Department in administering this exclusion. The intent of the exclusion is to prevent the payment of benefits for an in-patient, non-surgical, non-maternity admission (or portion of such admission) during which no specific professionally ordered therapy, designed to cure or alleviate the symptoms of an illness or injury, is administered to the patient. The absence of evidence on the hospital bill and/or the attending physician's service report, clearly establishing that specific therapy was administered, creates the presumption that the admission was "diagnostic" and benefits should be denied.
2. The intent and scope of benefits provided by Blue Cross and Blue Shield necessitates certain exceptions to this exclusion. Benefits should be provided for diagnostic admissions when one or more of the following circumstances is evident or can be established:
  - a. When the patient's condition clearly evidences the need for hospitalization such as: unconsciousness, semi-consciousness, in severe pain, bleeding, debilitated. This also includes the



very young and very old and other patients whose mental conditions would prevent proper investigation of apparent illness or injury on an out-patient or ambulatory basis.

- b. When the diagnostic studies performed are so complex as to preclude their satisfactory performance on an out-patient or an ambulatory basis such as: angiocardiogram, pneumoencephalogram, myelogram, lumbar puncture, cystoscopy with retrograde pyelogram, bronchoscopy, laryngoscopy, catheterization of the heart.
  - c. When the suspected diagnosis is one which, if confirmed, normally requires immediate hospitalization for medical or surgical care such as: suspected appendicitis, myocardial infarction, diseases characterized by rapid changes imperiling life.
  - d. When admission is in anticipation of surgery, but through no fault of the patient, the surgery is not performed.
3. Notwithstanding the exceptions previously mentioned, benefits should not be provided for diagnostic admissions:
- a. When the diagnostic procedures undertaken could just as readily have been performed on an out-patient basis without prejudicing the patient's physical condition or adversely affecting the quality of medical care rendered.
  - b. When the admission was for the convenience of the patient or his attending physician.
4. In determining whether or not benefits should be provided for a "diagnostic" admission, the opinion of the attending physician should be significantly considered in making the determination; but should not be the controlling factor.

We sincerely trust that these guide lines will help to eliminate past confusion as to what is and what is not a diagnostic hospital admission and that they will assist Nebraska physicians in determining and explaining to their patients when hospital services will not be covered.

## TO FIND ACHILLES HEEL

(Continued from page 111)

marked to my minister that at least he didn't have to worry about the nationalization of religion. He laughed and said "Not with our Supreme Court." (Reprinted from *Practice* by permission of author — Dr. David Freed).

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**Results of Wide Excision of Palmar Fascia for Dupuytren's Contracture With Special Reference to Factors Which Adversely Affect Prognosis — E. C. Weckesser** (10465 Carnegie Ave., Cleveland). *Ann Surg* 160:1007 (Dec.) 1964.

Two-thirds of 81 personal cases of Dupuytren's Contracture were operated by wide excision. The complications of operation were marginal skin loss, 36% and hematoma formation, 10%. Skin grafts were utilized in three. Wound healing averaged 35.4 days and loss of work six weeks. The age of the patients averaged 52 years. Results 5.7 years (average) later were good to excellent 67%, fair 28%, and poor 5%. Positive family history was found in 22% of the operated cases. These, involvement of more than one finger and Stage III disease, were each found to adversely affect prognosis to a significant degree. Wide excision was considered best for the healthy with widespread disease, younger patients, and those with a positive family history.

**Method for Estimating Blood Sugar — I. D. B. Brennie** (Guy's Hosp Medical School, London), H. Keen, and A. Southon. *Lancet* 2:884 (Oct. 24) 1964.

A new one-minute enzyme test strip for blood sugar ("Dextrostix") was studied. The method was found to be easy to perform: differences between observers were found to be small and the readings were little affected by lighting conditions. Comparison between strip readings and auto-analyser readings showed that the strip method tended to over-estimate higher ones, but the method seems worthy of further clinical trial.





# Books



**"The Coronary Arteries"** by William F. M. Fulton, MD. Published in January 1965 by Charles C. Thomas, Springfield, Illinois. 354 pages (8" by 10") with 147 illustrations (10 in color) and an additional 31 stereographic studies of the coronary arteries. \$20.50.

Dr. Fulton, Senior Lecturer in Medicine at the University of Glasgow, has written a fascinating book concerning his comprehensive research into the morphology and pathogenesis of coronary artery disease. From the basis of his own findings, the author confirms, challenges, or refutes many current concepts. Of special note are his observations on the structure, origin and clinico-pathological significance of arterial anastomoses . . . on the canalization of thrombotic occlusions . . . and on the microanatomy of thrombotically determined atherosclerosis. Originality, objective observation, and conclusions unhampered by traditional opinion make this book of service to all who are students of fundamental disease processes or who seek a basic understanding of the structural changes of coronary artery disease.

NOTE: Use of the special glasses supplied with this book enables the reader to enjoy the full 3-dimensional effect of the arteriographic illustrations.

**"Cardiopulmonary Hemodynamics in Health and Disease"** by Carsten Muller, MD. Published in January 1965 by Charles C. Thomas, Springfield, Illinois. 196 pages (6½" by 9½"). Price \$7.50.

In recent years catheterization of the right heart and the pulmonary vascular tree has become a reliable method of obtaining adequate knowledge of cardiopulmonary hemodynamics. This technique has provided valuable information about the developmental mechanism of such problems as cardiac failure, pulmonary hypertension, acute pulmonary edema, and chronic cor pulmonale. The present work is primarily concerned with the pathogenesis of chronic cor pulmonale and hemodynamics in lung diseases of various etiology. It is based on an extensive survey of the literature as well as the author's own investigations in this field. It is a clinical and physiological survey of this area. The author is an Associate Professor of Medicine at the University of Oslo.

**"The Non-Verbal Child"** by Sol Adler, PhD. Published in January 1965 by Charles C. Thomas, Springfield, Illinois. 163 pages (6½" by 9½"). Price \$6.75.

The author is Director of the Speech and Hearing Clinic at East Tennessee State University. He has written a simplified clinical guide to both the diversified problems and the habilitation of the child who is significantly retarded in language develop-

ment. This book will be of interest to parents of handicapped children, habilitationists, educators, physicians, nurses, speech therapists and social workers. Major areas discussed include:

- a. The Growth and Development of Communicative Behavior
- b. The Brain Mechanism and Communicative Behavior
- c. Testing for the Various Dysfunctions
- d. Causes of the Various Dysfunctions
- e. Differential Diagnosis
- f. Habilitation

**"Rehabilitation Medicine — 2nd edition"** by Howard A. Rusk, MD. Published 27 November 64 by The C. V. Mosby Company, St. Louis, Missouri. 668 pages (7" by 10") with 210 figures and 26 charts. Price \$15.50.

Howard Rusk and 36 collaborators have revised and rewritten the previous (1958) edition of this standard textbook on physical medicine and rehabilitation. Chapter headings include the following:

1. Therapeutic exercise and muscle re-education
2. Occupational therapy
3. Teaching the activities of daily living and homemaking
4. Rehabilitation nursing
5. Principles of orthotics
6. Management of psychiatric problems
7. Management of communication impairment
8. Management of social problems and vocational problems

The second half of the book is concerned with the application of the principles of rehabilitation medicine to patients with metabolic diseases, musculoskeletal problems, neurologic disorders, cerebral palsy, poliomyelitis, cancer, paraplegia, quadriplegia, pulmonary problems, vascular disease. The final two chapters deal with rehabilitation problems in children and in the geriatric patients.

**"Current Practice in Orthopaedic Surgery — Volume 2 — 1964"** by John P. Adams, MD. Published 6 November 64 by The C. V. Mosby Company of St. Louis. 231 pages (7" by 10") with 126 illustrations. Price \$13.50.

Dr. Adams and 12 other authorities discuss the following topics:

1. Tendon transfers for nerve paralysis of the hand and wrist

2. Sensibility of the hand
3. Fractures and dislocations of the lower thoracic and lumbar spines, with and without neurological involvement
4. Management of acute vascular injuries of the extremities
5. Fractures and dislocations of the elbow in children
6. Treatment of injuries of proximal interphalangeal joints of fingers
7. Fractures of the humeral shaft
8. Some psychological characteristics associated with orthopaedic complaints
9. Comparative biology of mineral deposition

"Industrial and Traumatic Ophthalmology — Symposium of the New Orleans Academy of Ophthalmology." Published 16 November 64 by The C. V. Mosby Company of St. Louis. 321 pages (7" by 10") with 134 illustrations. Price \$14.50.

This symposium includes the papers read and discussed at the February 1963 convention of the New Orleans Academy of Ophthalmology. Topics discussed include the following:

1. Ophthalmologic problems in industry (4 papers)
2. The ophthalmology of driving
3. Automotive trauma
4. Injuries to the eye and adnexa (contusion, concussion, orbital fractures, pulsating exophthalmos)
5. Chemical eye hazards in industry
6. Radiant energy and the eye
7. Traumatic glaucoma
8. Posttraumatic inflammatory processes

## TUBERCULOSIS ABSTRACTS

### RESPIRATORY SYMPTOMS, LUNG FUNCTION, AND SMOKING HABITS IN ADULT POPULATION

In a community-wide study undertaken in Tecumseh, Mich., an association has been demonstrated between cigarette smoking and the common symptoms of respiratory disease.

In recent years there has been much interest in chronic nonspecific respiratory disease, and particularly, in the use of epidemiological methods to identify factors of importance in the development and progress of chronic bronchitis, emphysema, and related disorders.

In an attempt to identify factors relevant to the maintenance of health and resistance to disease, Tecumseh, Mich., was selected as the site of a comprehensive, prospective epidemiological investigation of the entire community. Observations will be made over a period of years.

Tecumseh is a town of about 6,500 people. Included in the study also are some 3,000 people in the surrounding rural area. Data here reported were collected during a period beginning in March, 1959, and completed 18 months later.

### SMOKING HABITS

Questions asked adults related to cough, production of phlegm, incidence of chest illness, and shortness of breath. A simple test of ventilatory function was included in the clinic procedures, a Collins timed vitalometer being used to record vital capacity and forced expiration volume—(F.E.V.<sub>1</sub>).

Information was sought about past and present smoking habits in adults. Cigarette smokers were subdivided into three groups — those using less than a pack, a pack, and more than a pack a day. The distribution into light, moderate, and heavy categories was about equal in the 1,400 men, but very few of the 888 women said they smoked more than 20 cigarettes daily, and light smokers were about twice as common as moderate ones. Present age was not related to daily consumption of cigarettes except at both extremes of the range where the proportion of light smokers was largest. Of the men, 260 smoked pipes and cigars only.

Smokers were also divided into three groups according to the length of time they had been smoking, the divisions being at 10 and 20 years. Duration of smoking was highly correlated with present age and attempts at assessing its effect on the development of symptoms have been limited by this fact. The finding is in keeping with other reports that the majority of smokers acquire the habit early in adult life. In all, 59 per cent of men and 34 per cent of women smoked cigarettes.

Fifteen per cent of the men aged 16 or more had never smoked, the percentage being highest in the very young and very old. Of the women, 55 per cent were nonsmokers, the percentage of nonsmokers being much higher above 50 years of age than younger.

In men the proportion of ex-smokers increased with age, but in women it was slightly lower in the oldest age groups.

As for symptoms, persons who had both cough and phlegm, and one or both of these symptoms all day for at least three months each year, were designated as having Grade II symptoms; those with cough and phlegm to a lesser degree were designated Grade I.

The prevalence of Grade II symptoms in men who smoked cigarettes was six times that in nonsmoking men; the prevalence of Grade I symptoms was only twice as large. Among women, cigarette smokers had three times as much Grade II cough and phlegm and twice as much Grade I as nonsmokers.

Neither ex-smokers nor pipe and cigar smokers differed appreciably from the nonsmokers except in the oldest age group where the proportion with Grade II symptoms was less in nonsmokers. In the nonsmokers there was no appreciable difference between men and women in the prevalence of cough and phlegm.

The prevalence of symptoms increased with age in men who smoked cigarettes, being more marked



for Grade II cough and phlegm than for Grade I. If this were an effect of age or of some experience associated with aging, a similar trend should be noted in nonsmokers. However, no trend of this type was seen in relation to Grade II symptoms among nonsmokers.

#### SHORTNESS OF BREATH

In regard to shortness of breath, men cigarette smokers and ex-smokers were affected about equally and more often at all ages than nonsmokers. This suggests that smoking for prolonged periods of time may be related to the development of shortness of breath and that this is added to the effect of aging itself or of experiences associated with aging. Among the women, ex-smokers most commonly reported shortness of breath. Cigarette smokers had more shortness of breath than the nonsmokers below the age of 40 and less above this age.

In general, the percentage affected was largest in those smoking the most cigarettes and least in those smoking the fewest.

A comparison of the prevalence of shortness of breath by smoking class has been made in persons who did not have cough or phlegm. Ex-smokers of both sexes reported more shortness of breath than did any of the others, and among the older men cigarette smokers were more often affected than nonsmokers. Comparing cigarette smokers without cough and phlegm with all cigarette smokers, it is apparent that the excessive reporting of shortness of breath by the younger members of the group occurred in those who also had cough and phlegm.

#### F.E.V. VALUES

As for ventilatory function, men cigarette smokers had the lowest values at all ages and nonsmokers the highest, except in the youngest age group. Pipe and cigar smokers occupied an intermediate position and young ex-smokers had high values, whereas ex-smokers over 50 had low values. The mean values of F.E.V.<sub>1</sub> in women hardly varied between categories.

In men the mean F.E.V., adjusted to the overall mean age of 40 years was 3.35 liters in nonsmokers and 3:12 liters in cigarette smokers; the corresponding values in women were 2.35 and 2.28 liters.

There are still unexplained differences in the relationship between cigarette smoking and respiratory symptoms; these include the higher prevalence of cough and phlegm in men than in women who smoked less than 20 cigarettes a day, and the low prevalence of cough and phlegm and shortness of breath in older women who smoked cigarettes.

—Millicent Payne, MD, DPH, and Marcus Kjelsberg, PhD,  
American Journal of Public Health, February, 1964.

#### NOTICE TO ALL CONTRIBUTORS

The deadline for items to appear in the following issue of the JOURNAL is the 10th of the month. The JOURNAL goes to press on the 12th.

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(Please help us keep these addresses correct, by notifying the Editor of any changes).

## THE NEBRASKA STATE MEDICAL JOURNAL

### RETURN OF OLD FRIENDS

It is hoped that all of *Journal's* readers will note the return of two of our old advertisers in this issue. We are happy the Armour Pharmaceutical Company and the J. B. Roerig and Company made their wise decision to return to our advertising pages. We appreciate their rejoining the group of companies whose advertising helps support our *Journal*.

### RIGHTS OF THE PATIENT

During the past thirty years the scope of medicine has been considerably altered. This is true not only in the realm of medical and surgical disease, but also in medical economics. Control of poliomyelitis, osteomyelitis, tuberculosis, suppurative disease, and even cancer appears almost a "fait accompli." During this transition the physician has suffered loss of prestige, not necessarily because of his medical practices, but because of the environmental changes affecting both the patient and the physician. Governmental agencies at all levels are encroaching on medical practice. One wonders, during this confusion, if the patient may not have been forgotten.

Inalienable rights of any patient include the very best of medical and hospital care, the right to choose his own physician, and the right to pay for hospital and medical expenses within his economic ability. Human dignity is one of our choicest possessions and for years has been assured by our free enterprise system. Infringement on this very personal quality is evidenced by most proposed governmental legislation. Compulsory medical care of the individual is a most malignant infringement upon his natural rights. Even under the Kerr-Mills type of legislation the individual is required to pass a "means test," a philosophical admission of poverty and an affront to the personal dignity. Under a compulsory program an individual may lose his right to choose his own physician. More important, his right to pay

for hospital and medical care, even if he can well afford it. This type of program is debasing to the individual who takes pride in being self-sufficient, able to take care of his own problem in his own way.

The family is the basic unit of our existence, and inter-family relationships establish pride and humility in the family's ability to cope with the usual crises and to care for its own. Medical indigency is first the responsibility of the family. After family resources have been exhausted, then local city or county government should share the burden. Not until local agencies are no longer able to cope financially with a medical situation should the state or federal government become involved. It behooves us as physicians to make every effort to reestablish family responsibility for medical care.

The newest program, namely, "Eldercare" is a drastic reversal of other governmental proposals. Eldercare permits an individual to purchase medical and hospital care by paying wholly or in part for health insurance. Government involvement is limited to paying for part or all of the premium. Choice of the physician is left to the individual. His dignity is preserved by knowing his medical costs will be met. To me, Eldercare is completely acceptable and probably the true solution to this baffling program.

Returning to the "Rights of the Patient," I have one additional comment. Every patient has a right to receive, from his hospital and medical experience, the utmost in rehabilitation. I feel definitely that patients with heart disease, CVA's, pulmonary disease, arthritis, diabetes, and other disabling conditions are not receiving needed instructions and preparation to adapt them to other than hospital routine. For years, orthopedic patients have been taught to accept their disabilities and are prepared socially, educationally and vocationally to take on the world. What about the coronary, the CVA, and many others with handicaps other than orthopedic? It is the physician's responsibility to ensure these patients the utmost in physical, educational and psycholog-



ical recovery. Let us not, as physicians, deny any individual those rights to which he is entitled and which we are so qualified to dispense. The physician's "image" can only be restored by regaining the quality of patient service envisioning his total welfare, unselfishly, as we have been so ably taught.

—Fritz Teal, MD

### LAS VEGAS — WHY?

For the past four years the Nebraska State Obstetrical and Gynecological Society has held its annual meeting in Las Vegas. Why?

First we must understand why this organization was conceived ten years ago with so many medical societies already holding meetings. At that time an attempt was made by obstetricians and gynecologists of this state to develop some type of membership in the American College of Obstetricians and Gynecologists which would include practitioners who, while not limiting their practice to, were especially interested in this field and did a certain amount of it. When this drive for some type of associate membership in the American College failed, the Nebraska State Obstetrical and Gynecological Society was formed in an effort to bring all Nebraska physicians practicing obstetrics and gynecology together to hear nationally known individuals, to learn of recent advances in this area of medicine, and to present and discuss worthy papers on related subjects.

The first meeting was held in Grand Island on a miserable day with hazardous, snow packed roads. Despite the weather, 27 doctors registered at the meeting. Subsequently, annual meetings were held in Fremont, Beatrice, Omaha, and Lincoln. The highest attendance was at the organization's second yearly meeting, in Fremont. Forty members registered. The membership list fell from a high of 90 in 1956 to 74 in 1959. Attendance at meetings waned to a low of 12 at one meeting. Something was not right despite good speakers and good papers.

An attempt was made next to entice the doctors with something additional. Medicine was not enough. The 1960 annual meeting was held in Broken Bow at the opening of the pheasant season. The hunting was good. The meeting was good. Attendance still lagged.

In 1961, a gamble was taken and off to Las Vegas the organization went for their annual gathering. The length of the meeting was increased from one to two days. Recognized authorities in their fields came and shared their knowledge with the Society as guest speakers. Many aspects of medicine related to obstetrics and gynecology were covered in excellent papers by doctors from Nebraska. In addition there was the allure of "Fabulous Las Vegas" with rooms, meeting hall, cocktail party, dinner and show complimented by the hotel. Who could resist?

In the past four years the growth of the organization has been phenomenal. There are now over two hundred members. Registered attendance jumped to a high of 110, in 1963. In 1964, the attendance dropped some, due perhaps to many of the state's physicians following Bob Devaney and the Big Red to Dallas for the Cotton Bowl game on New Year's Day.

What has this story of travel and growth done to our organization? Has it caused us to gain the reputation of being that "Obstetrical and Gynecological Playboy Society" as some have said? Or has it quite possibly advanced the original ideas of the founders of the Society by disseminating sound information about obstetrics and gynecology and associated subjects and encouraging active participation in the presentations and discussions to increasing numbers of Nebraska physicians.

Personal attendance and participation at one of these meetings is the prerequisite to forming an opinion on the above questions. I attended both the 1962 and 1963 meetings of the Nebraska State Obstetrical and Gynecological Society. The 1963 meeting was held in conjunction with the Idaho State Obstetrical and Gynecological Society. I was amazed at the diversification of the papers.



They were all related to obstetrics or gynecology and were presented and discussed by generalists, surgeons, pathologists, otolaryngologists and obstetrician-gynecologists. The papers were both learned and practical in nature. They gave information I could use almost daily in the care of my patients. The fantastically high percentage attendance at the papers and discussions further amazed me. By noon of the first day over 90 per cent of those registered were at the meeting. I have been to many meetings but have never seen such good attendance percentagewise. Incidentally, I thoroughly enjoyed the evening entertainment.

I would say that the original aims of the founders of the organization are being met, judged by my own personal experience of attending one of these meetings in Las Vegas. More good papers are being presented. More Nebraska physicians are attending the meetings of the Society. More nationally sought speakers are willing to come. To have been able to accomplish these goals within the state of Nebraska would have been ideal, but it appears that the Nebraska physician is following a national trend to attend meetings where that something extra such as the climate, the scenery or the entertainment is unusual.

Why Las Vegas? Have you a better suggestion?

—Harold E. Harvey, MD

## AN EDITORIAL

DONOVAN F. WARD, MD

President, American Medical Association

The year 1965 is a crucial year for American medicine. It is a year in which important and far-reaching events are transpiring that may have a long-lasting impact on how we practice medicine in America.

An outstanding highlight in medicine in 1965 will be the 114th annual convention of the American Medical Association June 20-24 in New York City. It is our conservative estimate that more than 10 per cent of all American physicians, and perhaps as many as 15 per cent of those in private prac-

tice, will register for the New York convention.

Nowhere else in the entire world do physicians gather in such numbers to continue their medical education in an intensive short course that, literally, has something for everyone. Hundreds of scientific papers will be presented by the top medical scientists of our time, from foreign lands as well as our own country. Newest teaching films will be shown. Hundreds of scientists will offer exhibits in which the entire spectrum of medical progress in 1965 will be on view.

American physicians do not attend the AMA annual convention just to take a trip to New York, although that is an interesting sidelight. They attend because they have learned through the years that nowhere else can they find out so much about new developments in medical practice; where they can learn many things that will be of inestimable value to them in their own practices.

The Council on Postgraduate Programs of the AMA has done an outstanding job in preparing the scientific programs for the 114th annual convention. This is the single most important medical scientific meeting in the world this year.

On behalf of your professional society, the American Medical Association, I urge personally that every physician in America attend the June convention.

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**Colloid Carcinoma of Anal Gland Origin:  
Report of a Case and Review of the Literature** — J. Winkelman (350 E. 30th St., New York), J. Grosfeld and B. Bigelow, *Amer J Clin Path* 42:395 (Oct.) 1964.

A perianal colloid carcinoma which originated in an anal gland was observed and pertinent literature is reviewed. A colloid carcinoma arising from the mucous secreting cells of the anal gland had not been documented previously, although epimoid carcinomas and adenocarcinomas of anal duct origin were recorded. This case reports the anal gland origin of some perianal colloid carcinomas with no rectal mucosal connections.

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# Comments From Your President

This is my final message to the members of the Nebraska State Medical Association. While I have aged considerably in the past two years, I will not indulge in reminiscing. I have few regrets and it is much more stimulating to speculate on the future than review the past. Any information concerning the past year's activities may easily be obtained by reviewing the reports of the various State Committees, Council Meetings and Sessions of the House of Delegates as recorded in this Journal from time to time.

By the time this appears in print, it is likely that our fate as far as free enterprise is concerned will be decided. Of course, if Eldercare is passed then our path is clear. We must labor long and hard to insure the success of this great program. On the other hand, if Medicare should be the choice of Congress, then I am completely at a loss to predict or recommend a course. I believe that we must never lose sight of our fundamental heritage — that is to take care of the sick and injured to the best of our abilities and let any decision be based on this fundamental.

Concerning the future of the NSMA, I predict steadily increasing activities. As the art and science of medicine along with socio-economic factors become more complex, more time and more man power will be required to solve our problems. This brings up a matter to which I have given considerable thought, and now that I am almost a past president, I can bring to you for your consideration. It is the consideration of remuneration for the president. This certainly would not be unique if adopted, since a good many state associations are already doing this. I sincerely believe that with each year the president must of necessity devote more time to the duties of his office. Some

effort should be made to repay him in part for the financial sacrifices made during his term of office. In addition, it would insure having available the best presidential material. At present a doctor alone can scarcely afford the "luxury" of the office. The situation is not acute in practice with partners as almost always the other partner is glad to assume the extra work. The problem is in single practice and this must be recognized and corrected.

Shortly after this appears in print, the matter of the new building will be before the House of Delegates. I cannot predict whether the membership will back the decision of the Planning Committee, the Council and the House of Delegates, but I sincerely hope they will. I felt compelled to recommend this project for the eventual improvement of the NSMA. If this should not become a reality this year, it will surely later come about. A progressive essential project of this kind cannot be suppressed.

Now, I would like to express my sincere appreciation to all of those who have labored so diligently for the Association, thereby making my task easier. The various committees, the Board of Trustees, the Council and the House of Delegates have all done a tremendous job. An especial kudos to Ken Neff and Bill Schellpeper. We have fought a good many battles together and have won a surprising number of them.

The NSMA will be in good hands next year. Bill Wright is dedicated both to the practice of medicine and to organized medicine. With your continued support, he will have a brilliant term. Good luck, Bill, the gavel is yours.

RICHARD GARLINGHOUSE,  
President.



# Family Centered Genetic Counseling:

## ROLE of *The Physician*

## and *The Medical Genetics Clinic*

**H**EREDITARY diseases have assumed a prominent position both in private clinical practice and in academic medicine. Interpretation of genetic mechanisms to families remains the responsibility of each clinician during every phase of study of the patient and his disease. Presentation of empiric-risk figures to the family fails to satisfy these obligations and may cause detrimental results.<sup>1</sup>

Psychodynamically oriented counseling has been developed over the past ten years through experience with over six hundred families.<sup>2-6</sup> Such counseling realistically relates genetic mechanisms and risks with psychosexual and reproductive problems which stem from the patient's distorted impressions, often stemming from bizarre ideas and feelings about the "family disease."

The purpose of this paper is to acquaint the physician with the impact of counseling upon families of patients afflicted with hereditary diseases. The techniques used in counseling will be presented. The role of the attending physician and of the medical genetics clinic in the management of the families will be discussed.

### Counseling Techniques

Initially, the patient with hereditary disease undergoes a detailed history and physical examination. However, because of the wide range of phenotypic manifestations that hereditary diseases may show, careful attention is focused upon "minor" stigmata. Two families will illustrate the importance of examination for asymptomatic manifestations. A study of a family (Fig. 1) with mandibulofacial dysostosis<sup>7</sup> showed that the mother of the proband (the original patient) had a single small (3 mm) unilateral pre-

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auricular appendage and a high arched palate (Fig. 1-A); the proband showed only bilateral pre-auricular appendages and a high arched palate (Fig. 1-B). Two of the proband's children showed severe facial disfigurement including bilateral pre-auricular appendages, macrostomia, hypertelorism (wide interocular space), micrognathia, and high arched palates (Fig. 1 C, D). In another family (Fig. 2) with osteogenesis imperfecta<sup>8</sup> the proband had the disease in its severe form with over 150 bone fractures (Fig. 2, II-2). Her son had only blue sclerae (Fig. 2, III-1) while her grandson had the disease in its severe form and sustained over fifty fractures before age seventeen (Fig. 2, IV-1).

The critical point in these family illustrations is that the proband's mother with a pre-auricular appendage in the first family and the proband's son with the blue sclerae in the second family are both genetically involved with their respective diseases. Only by very careful examination can these minimal stigmata be discerned. Had the finding in the first individual not been recognized one might have surmised that a mutation had occurred. Likewise, had the blue sclerae not been recognized in the individual in the





Figure 1. Patients with mandibulo-facial-dysostosis showing a wide range of phenotypic variation.

second family, we would have considered him free of the condition. Both of these diseases are due to an autosomal dominant gene. Each individual, no matter how minimally affected, harbors the gene and has the propensity to pass it on in its most severe form to half his progeny.

The family history must be detailed and should be reviewed with each available member of the family. Attention must be focused upon paternities, possible illegitima-

cies, miscarriages, pathogenic exposures during pregnancy (particularly during the first trimester), diseases, and external stigmata.<sup>2, 9</sup> Frequently family albums supply clues to the presence of hereditary diseases in individuals who are deceased or otherwise unavailable for study.

The physician must search all available medical records on the family in order to uncover and confirm previous diagnoses. On a research basis our medical genetics team uses

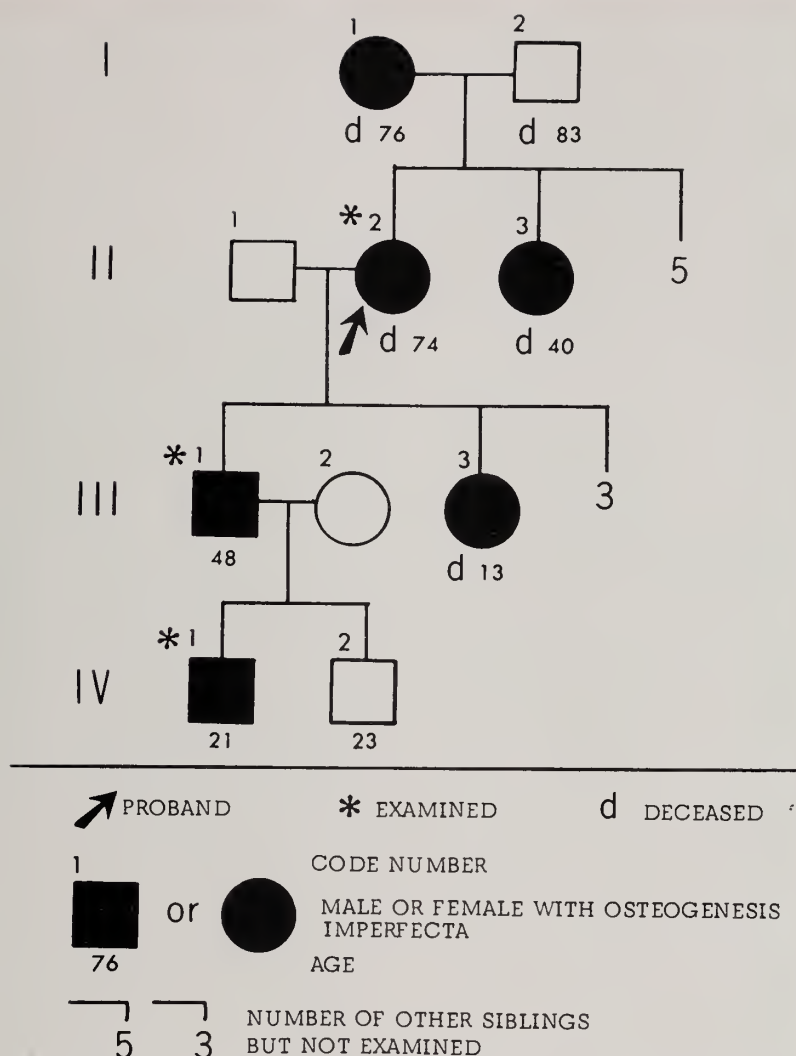


Figure 2. Pedigree of a family with osteogenesis imperfecta showing transmission of this defect through four generations.

screening questionnaires, physicians' and hospital records, death certificates, and services of state and county welfare agencies. The practicing physician may not have the time to do such an extensive survey; however, even a limited amount of time may yield important results. Physicians in Nebraska are in a uniquely helpful position in that frequently they have knowledge of the history and findings in members of the family through several generations. This is particularly true in farming communities where there is little population migration.

After completion of the examination and appraisal of all the information accrued, a pedigree is constructed and analysis of the

mode of inheritance in the particular family is made.

The "pedigree" is part of the "language" of the geneticist, but it may serve also as an important tool for communication of the facts of inheritance to the patient. There are no hard and fast rules for pedigree construction; however, the symbols used in Figure 2 are most frequently used by geneticists. The squares and circles denote male and female respectively. When these symbols are filled in, it means that the individual is affected with the disease under consideration. A straight horizontal line connecting a male and female indicates a marriage as seen in Figure 2, I-1 and I-2. However, if these

individuals had been first cousins (consanguinity), a double straight line would have been used. Vertical lines with the appropriate squares or circles denote progeny. Miscarriages are indicated by small dots instead of squares and circles. The arrow as seen in Figure 2 is used to designate the proband (propositus) or index case. These latter terms refer to the first patient to come to the attention of the geneticist. The reason for identifying this individual is a statistical one. In working out Mendelian ratios, the proband is frequently excluded in the mathematical computations. Through experience in using the pedigree to help impart genetic information to patients, we have been impressed at how readily they understand the symbols and comprehend the particular mode of inheritance. As a matter of fact, we frequently find one or more family members who help in obtaining information and become quite proficient at pedigree construction.

Assessment is made of the feelings and ideas of the patient toward the family disease. Further study is directed toward attitudes in the various members of the kindred. Interpretation of this emotional content is made to the family when it is felt that the family members are ready to accept and understand it. Often bizarre impressions steeped in myth and folklore,<sup>10, 11</sup> are held about hereditary diseases. Counseling of the patient must be accomplished in a setting created by the physician which casts him in the role of an empathetic "listening ear." It may take several sessions for the patient to be able to give an account of his feelings about the disease in his family. Acceptance and practical planning follow. It is only at this time that risk-figures for the genetic transmission can be understood and accepted by the client.

Medical Genetics Clinics have been established in several medical schools throughout the country. There is a newly established Medical Genetics Clinic at the University of Nebraska College of Medicine. Such clinics are devoted to the diagnosis, treatment, and counseling of patients with hereditary diseases.<sup>10</sup> These clinics are under the direction of physicians with specific training in

medical genetics. They offer unique teaching experience for medical students, interns, and residents who are enabled to gain experience in the management of these hereditary problems.

### Discussion

Previous studies in genetic counseling<sup>2-6</sup> have described some of the emotional responses engendered by the knowledge of hereditary transmission of disease. Responses such as guilt, anxiety, hostility, impotence, frigidity, reduced reproductive performance, marriage disruption and divorce have been encountered frequently.<sup>2, 3, 4</sup> After dynamically oriented genetic-counseling sessions many of these emotional problems have been alleviated. The point is that these are medical problems for which only the physician is prepared to take on the responsibilities for guidance and management. Genetic counseling, among other things, is a psychotherapeutic session. Unfortunately, sometimes the physician refers these genetic problems to non-medically oriented laboratory or agency personnel who may be deficient in the understanding of such emotional problems. In so doing he removes himself from the team. In the handling of the patient, non-medically oriented personnel may present a cold, stereotyped, mathematical account of the empiric-risk figures of the disease. In such a setting, risk figures are usually misunderstood, frequently repressed, and leave the patient bewildered. Unsatisfactory results ensue for the patient as well as the counsellor.<sup>4</sup> Moreover, the patient may show guilt and manifest emotional conflicts with respect to such risk figures.<sup>2, 3, 4, 10</sup>

The physician in a busy practice can handle effectively many of these problems; however, when he is uncertain he can make referrals to a medical geneticist. There are recent indications that the number of such individuals trained in both medicine and genetics will increase so that this service will be even more widely available. The newly established Medical Genetics Clinic at the University of Nebraska College of Medicine offers this service on a referral basis for all patients in Nebraska. It meets for



this purpose each Wednesday morning at ten.

### Summary

An outline of the clinical approach and philosophy in the management of patients and families with hereditary diseases has been made. Emphasis has been placed upon the importance of recognizing the many emotional problems which may be engendered by the presence of a hereditary disease in the family. Such problems are best handled by a physician.

### Acknowledgement

We wish to express our sincere appreciation to Dr. Robert L. Grissom, Chairman of the Department of Internal Medicine, University of Nebraska College of Medicine, Omaha, for his assistance in the preparation of this manuscript.

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"An accusation leveled against the pharmaceutical industry is that the industry is callously launching new drugs too rapidly, without subjecting them to a sufficiently prolonged and careful toxicological testing. Whoever is familiar with the exceedingly painstaking and elaborate system of pharmaceutical testing . . . knows there is no substance to this accusation." (Prof. Ernst B. Chain as quoted in Pageant, p. 155, December, 1964).

# Immunization Status of SELECT High-Risk ADULT Population Groups

## Introduction

THE Vaccination Act of 1962, as passed by Congress, has stimulated development of surveys to ascertain the immunization status of various populational groups. Although major emphasis has been placed on surveys for determining immunization status of infants, preschool and school age children, random surveys of adults (especially adult groups of high-risk), have been conducted. Since natural exposure cannot be depended upon to maintain adequate protective levels, it is now recognized that periodic immunization should be practiced throughout adulthood.<sup>1-7</sup> A four-year schedule, with leap year providing a convenient guide, has been

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recommended for smallpox, diphtheria, tetanus, and poliomyelitis.<sup>1</sup>

## Purpose

The purpose of this investigation was dual, the primary one being to delineate the extent of current immunization among high-

Figure 1

To implement the Omaha-Douglas County Medical Society recommendations pertaining to adult immunization emphasizing leap year to bring immunization up to date, the following information related to your own immunization status would be of value. It would be helpful to know what you are doing in your own practice for the safeguard of your own health. The results will be sent to all members of the Medical Society. Check appropriate square.

Public Health Committee,  
Omaha-Douglas County Medical Society

1. When was the last time you had a general physical examination?  
☐ Within the past year    ☐ 1 to 4 yrs.    ☐ Over 4 yrs.
2. Last time smallpox vaccination.  
☐ Less than 4 yrs.    ☐ Over 4 yrs.    ☐ Childhood    ☐ Never
3. Last time immunized against tetanus.  
☐ Less than 4 yrs.    ☐ Over 4 yrs.    ☐ Childhood    ☐ Never
4. Last time immunized against diphtheria.  
☐ Less than 4 yrs.    ☐ Over 4 yrs.    ☐ Childhood    ☐ Never
5. Last time immunized against polio.  
 Injectable: ☐ Less than 4 yrs.    ☐ Over 4 yrs.    ☐ Never  
 Oral: ☐ Type I    ☐ Type III    ☐ Type II    ☐ Never
6. Last time immunized against influenza.  
☐ Less than 1 yr.    ☐ Over 1 yr.    ☐ Never
7. Last tuberculin test.  
☐ Less than 1 yr.    ☐ 1 to 4 yrs.    ☐ Over 4 yrs.  
☐ Childhood    ☐ Never  
 Reaction: ☐ Positive    ☐ Negative    ☐ Unknown
8. Last chest X ray.  
☐ Less than 1 yr.    ☐ 1 to 4 yrs.    ☐ Over 4 yrs.    ☐ Never
9. Year graduated from medical school\_\_\_\_\_
10. Type of practice\_\_\_\_\_

risk adult population; the second, to focus attention upon immunization in such way as to encourage individuals whose protection could not be considered current to seek immunization. It was hoped also that physicians, once stimulated to become immunized themselves, would be more likely to stress immunization for their adult patients.

## Methods

Five high-risk groups were selected for survey: physicians, dentists, nurses, hospital personnel, and educators. Each group, through an appropriate committee, conducted the survey of its own members in the spring of 1964. The greatest majority of persons surveyed were residents of the area of Metropolitan Omaha. Questionnaires were distributed by mail or payroll envelopes and were forwarded to the Health Department for compilation and analysis. To assure maximum return, questionnaires were kept short and no signature or personal identification was requested.

A sample questionnaire is shown in figure 1.

Questions relating to physical examination, chest X ray, and tuberculin testing were incorporated to ascertain the degree

of their acceptance as a preventive procedure as compared to immunization.

At time of routine physical examination, the physician has an opportunity to make available a variety of procedures to safeguard and promote the health of his patient. The patient is likely, at this point, to accept those procedures for which the physician has developed some personal conviction.

## Results

Results are set forth in table 1. Physical examination, chest X ray, and immunizations were considered current if performed within the previous four years.

## Replies

The exact number of persons surveyed could not be ascertained, as hospitals were not certain of the number of questionnaires distributed to employees. A total of 6030 questionnaires, however, were returned. Percentage of returns varied from approximately 50 per cent to 100 per cent. Full support given by school administrators assured complete response by teachers.

## Physical Examination

One hundred per cent of teachers and veterinarians (only 17 veterinarians) had

Table 1  
SUMMARY OF FIVE QUESTIONNAIRES ON PREVENTIVE  
MEDICAL PRACTICES INCLUDING IMMUNIZATION OF SELECT  
HIGH-RISK ADULT POPULATION GROUPS

|                       | PHYSICIANS |     | DENTISTS |     | NURSES |    | HOSPITAL<br>PERSONNEL |    | VETERINARIANS |     | TEACHERS |         |
|-----------------------|------------|-----|----------|-----|--------|----|-----------------------|----|---------------|-----|----------|---------|
|                       | No.        | %   | No.      | %   | No.    | %  | No.                   | %  | No.           | %   | No.      | %       |
| Surveyed -----        | 504        | 100 | 230      | 100 | --     | -- | --                    | -- | 17            | 100 | 1796     | 100     |
| Replies -----         | 338        | 67  | 128      | 55  | 882    | -- | 2869                  | -- | 17            | 100 | 1796     | 100     |
| Physical              |            |     |          |     |        |    |                       |    |               |     |          |         |
| Examination -----     | 261        | 77  | 111      | 87  | 783    | 89 | 2370                  | 83 | 15            | 88  | 1796     | 100     |
| Chest X ray -----     | 157        | 47  | 96       | 75  | 557    | 63 | 1783                  | 62 | 5             | 29  | 1796     | 100     |
| Tuberculin Test ----- | 11         | 3   | 4        | 3   | 176    | 20 | 620                   | 22 | --            | --  | --       | --      |
| Influenza -----       | 88         | 26  | 20       | 16  | 167    | 19 | 636                   | 22 | 2             | 12  | --       | --      |
| Smallpox -----        | 126        | 38  | 24       | 19  | 221    | 25 | 599                   | 21 | 2             | 12  | 441      | 25      |
| Diphtheria -----      | 106        | 31  | 17       | 13  | 239    | 27 | 583                   | 20 | 1             | 6   | 402      | 22      |
| Tetanus -----         | 159        | 47  | 35       | 27  | 351    | 40 | 991                   | 35 | 7             | 41  | 575      | 32      |
| Poliomyelitis:        |            |     |          |     |        |    |                       |    |               |     |          |         |
| Salk -----            | 202        | 71  | 61       | 64  | 518    | 59 | 1482                  | 52 | 8             | 57  | )        |         |
| Sabin:                |            |     |          |     |        |    |                       |    |               |     | )        |         |
| I -----               | 285        | 84  | 103      | 81  | 737    | 84 | 2200                  | 77 | 11            | 61  | )        | 1594 89 |
| III -----             | 271        | 80  | 95       | 74  | 701    | 80 | 2037                  | 71 | 10            | 58  | )        |         |
| II -----              | 267        | 79  | 89       | 70  | 671    | 76 | 2002                  | 70 | 10            | 58  | )        |         |



secured a physical examination within the previous four years. School policy requires examinations be secured, in some instances, as frequently as every year. Physicians, with 77 per cent examined, were lowest of the five professions surveyed.

### **Chest X ray**

Of all preventive medical procedures, other than the physical examination, it appeared that the chest X ray was most likely to be applied. Again, teachers claimed 100 per cent participation, while veterinarians at 29 per cent were low. At 47 per cent, physicians were well below the average.

### **Tuberculin Test**

Since repetition of tuberculin testing is not recommended if once a positive test is secured, it would not be expected that physicians or dentists, who represent an older population, would give a high percentage. Student nurses and younger hospital employees account for the comparatively higher participation in their groups.

### **Immunizations**

The current immunization status of the five high-risk groups was all dangerously inadequate, with the possible exception of poliomyelitis. In the smallpox epidemic in England and Europe in 1961, the highest morbidity and mortality occurred among physicians, nurses, hospital personnel, and patients inadequately protected. With only 38 per cent of the physicians, 25 per cent of the nurses, and 21 per cent of the hospital personnel in Omaha currently protected against smallpox, conditions are conducive to a repetition of the British experience.

### **Discussion**

Questionnaires as to preventive medical practices, including immunizations among high-risk adult groups, revealed that routine physical examinations and chest X rays are the only generally recognized procedures applied presently. Immunization against poliomyelitis constitutes an exception but cannot be properly evaluated as a routine in view of the recent concern over poliomyelitis and widespread popular community

immunization-programs of 1962. Immunization against smallpox, diphtheria, and tetanus, however, evidently is not established routine for adults in the Omaha area. Medical education, moreover, does not appear to be an advantage to the physician in helping him attain appreciably higher immunization levels above those of nurses and teachers.

If immunization is to be incorporated as a part of routine practice, it seems desirable for the physician; first, to bring his own immunization status up to date and, second, to start immunizing adults as a part of the regular physical examination routine. Special high-risk groups, such as physicians, nurses, hospital personnel, and teachers, might well be immunized through special clinics established specifically for them. Untold would be the health educational implications for the community afforded by routine current immunization of these groups. Success of any immunization program will be determined by the conviction health personnel has for immunization as a personal preventive health measure.

### **Summary**

1. Surveys to ascertain preventive medical practices, including immunization status of physicians, dentists, nurses, hospital employees, veterinarians, and teachers are presented.
2. Physical examinations and chest X rays appear the only two routine preventive measures employed in the Omaha area.
3. Immunization against smallpox, diphtheria, and tetanus is considered inadequate to provide protection for members of the high-risk groups.
4. Immunization against poliomyelitis is currently high as a result of recent concern with the disease culminating in Sabin - Oral - Sunday programs of 1962.
5. Physicians are encouraged to incorporate immunization as a routine procedure in medical practice, particularly at a time of physical examination.

6. Success of an immunization program will depend upon conviction of physicians and health personnel for immunization as a personal procedure.

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The wild parties and sexual excesses of the gangs are usually blamed on drugs and alcohol. But if you think drugs and alcohol are the only causes, then you do not know the mood of today's teenagers; and you have not seen many of their unsupervised parties. The phenomenon known as "gang psychology" also plays an important part. It is the same psychology that causes youngsters to see who will first turn "chicken" by seizing the steering wheel of a car traveling unguided at 70 miles an hour. It is the psychology of youngsters so afraid of group opinion that they won't dare not take a dare.

A significant fact is that juvenile drug abuse seldom takes place by ones and twos. It is usually in a gang or party setting. Somebody starts it and everyone else goes along for fear of appearing "chicken."

# Sodium Content of Drinking Water in Nebraska

THE treatment of certain cardiac, renal, and hepatic diseases with low salt diets is recognized as an often effective measure. In theory, in a person with alteration of sodium metabolism, a reduced sodium intake will result in a smaller total body sodium with less retained water.

There has been much emphasis placed on the sodium content of natural and prepared foods, and many diets have been formulated to aid in the preparation of palatable low sodium diets. In 1947 Cole introduced the possible significance of sodium in drinking water, an often unsuspected source of considerable sodium.<sup>1</sup> Since that time there have been several articles concerned with the sodium content of drinking water in many states.

There is a recent report of two cases of congestive heart failure that were not controlled until it was recognized that their drinking water contributed more sodium than the restriction for the total diet allowed.<sup>2</sup> While these were extreme examples of high sodium water, similar problems are possible in many towns in Nebraska.

The Nebraska State Health Department has routinely analyzed public water supplies and has compiled average values representing several samples of water from July, 1960, to July, 1963.<sup>3</sup> The majority of these samples were from the supplying wells; a few samples were taken from the distribution-system. The sodium values were determined by flame spectrophotometry. Table 1 gives the sodium content in milligrams per liter of water and the hardness expressed as milligrams of calcium carbonate per liter of water. These representative values may not reflect seasonal variation. Only communities with 50 mg

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sodium per liter or more were included; this limit was chosen arbitrarily since 50 mg per liter will give a person drinking 3 to 4 liters a day a total of 150 to 200 mg of sodium. Lincoln and Omaha were also included. Obviously, the higher the sodium content or the stricter the sodium restriction, the more important is the sodium content of the drinking water. Also, low sodium foods may have their sodium content increased when boiled in relatively high sodium water even if the water is discarded, and higher sodium foods will lose less sodium when boiled under the same circumstance.<sup>4</sup>

Figure 1 shows the distribution of the towns with over 50 mg sodium per liter. No general statement can be made about the pattern.

Water softening is another problem. The municipal treatment plants usually use the lime-soda ash method.<sup>5</sup> Columbus, Falls City, Lyons, Nebraska City, and Superior use this method or a variation. The calcium and magnesium ions, which are principally responsible for hardness, are precipitated with calcium hydroxide and sodium carbonate, primarily as magnesium hydroxide and calcium carbonate. Sodium is thus added to the water; the amount added depends upon the degree of softening desired.

The ion-exchange process is more popular for home use for softening hard water, al-



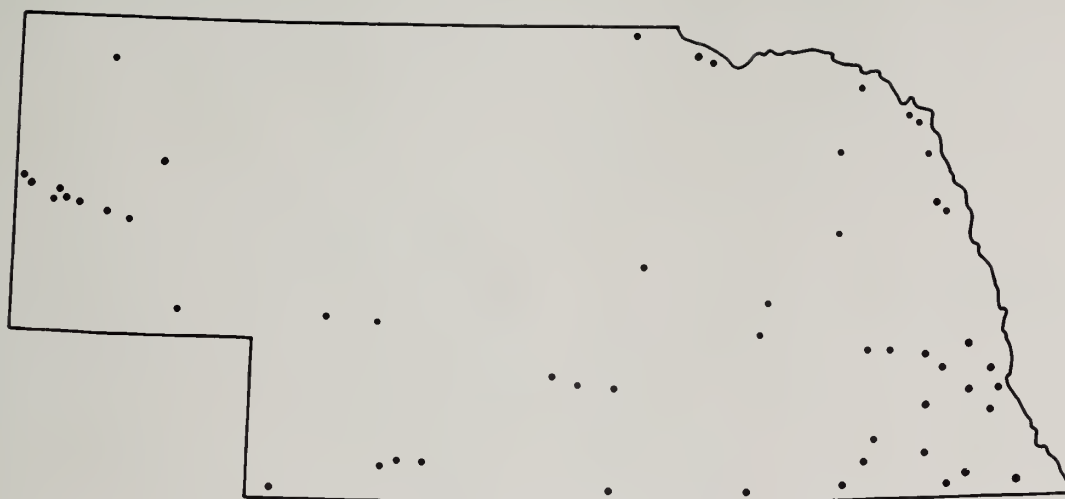


Figure 1. Distribution of towns with 50 mg. or more sodium per liter of drinking water.

Table 1

| Community     | Sodium<br>mg/liter | Hardness<br>mg CaCO <sub>3</sub> /liter |                   |         |
|---------------|--------------------|-----------------------------------------|-------------------|---------|
| *Alliance     | 78                 | 294                                     | Maskell           | 102 640 |
| Anoka         | 53                 | 740                                     | Minatare          | 112 150 |
| Bridgeport    | 112                | 292                                     | *Monowi           | 460 80  |
| Burchard      | 85                 | 2600                                    | Morrill           | 87 338  |
| Clarks        | 58                 | 324                                     | Naponee           | 71 572  |
| Craig         | 70                 | 392                                     | ‡*Nebraska City   | 50 196  |
| Culbertson    | 59                 | 528                                     | ‡‡*Nehawka        | 110 76  |
| †*Dakota City | 78                 | 556                                     | North Loup        | 65 434  |
| Dawson        | 58                 | 516                                     | †Oakland          | 69 476  |
| DeWitt        | 175                | 260                                     | †*Omaha           | 48 153  |
| Eagle         | 60                 | 380                                     | Overton           | 61 454  |
| Elm Creek     | 63                 | 364                                     | Panama            | 63 300  |
| †*Fairbury    | 62                 | 208                                     | Paxton            | 270 568 |
| *Filley       | 58                 | 408                                     | Plymouth          | 60 452  |
| Garland       | 92                 | 192                                     | Raymond           | 52 304  |
| Gering        | 150                | 262                                     | Scottsbluff       | 188 328 |
| Haigler       | 300                | 1480                                    | †South Sioux City | 80 600  |
| Hardy         | 57                 | 256                                     | Steinauer         | 78 548  |
| Henry         | 68                 | 320                                     | Syracuse          | 52 290  |
| Hershey       | 110                | 426                                     | †Talmage          | 52 152  |
| Hordville     | 53                 | 372                                     | Terry Town        | 110 368 |
| Kearney       | 68                 | 428                                     | Trenton           | 70 304  |
| Leigh         | 73                 | 392                                     | *Verdel           | 300 72  |
| †*Lincoln     | 26                 | 196                                     | Waverly           | 110 316 |
| Lodgepole     | 101                | 232                                     | *Whitney          | 270 380 |
| Louisville    | 55                 | 350                                     | Winnebago         | 122 644 |
| McCook        | 68                 | 304                                     | Winside           | 62 492  |
| *Macy         | 103                | 492                                     |                   |         |

\*—samples from distribution system  
†—water treatment plant used

‡—water treatment plant used with lime softening  
‡‡—water treatment plant used with ion-exchange softening

though there is one municipal ion-exchange-treatment plant at Nehawka and one being constructed at Macy. This process uses a resin, usually Zeolite, which exchanges two ions of sodium for each ion of calcium or magnesium; the sodium that was originally attached to the resin goes into the water and the calcium or magnesium is bound to the resin. The resin is recharged at intervals by adding salt to the resin tank. By this process it is possible to remove essentially all the hardness. Actually, the maximum softening is regulated by the efficiency of the system and the degree of replacement of the resin-bound sodium; 1 mg hardness as calcium carbonate is approximately equal to 0.46 mg sodium in this softening process. It can be seen that considerable sodium could be introduced in water such as at Burchard with a total hardness of 2600 mg per liter or at Haigler with 1480 mg per liter. If maximum exchange were achieved, the sodium content would be 1280 mg sodium per liter at Burchard and 980 sodium per liter at Haigler.

If the sodium content of the drinking water is too high to maintain a desirable sodium restriction, distilled, deionized, or

other low sodium water is advisable. If softening of the water is necessary with a home unit, the plumbing should be connected so that only the bath and washing water is softened and the drinking and cooking water is not altered.

### Summary

The sodium in drinking water may furnish a considerable and unsuspected quantity of sodium to the cardiac, renal, or hepatic patient on a low salt diet. The average sodium content of water is presented for Nebraska towns with 50 mg per liter or over. The possible increase of sodium content by ion-exchange softening is discussed.

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"... the federal government had no right 'to assume and assert a priority of interest in the problems of youth and aged, the ill and the poor, and the temporarily unemployed.'" (Ex-president Eisenhower as quoted by Chicago Tribune, December 10, 1964).

# References

## DROP INTO YOUR LAP

**T**HE increasing volume of medical literature is the result of the ever-growing emphasis on research. Without access to this literature research would be greatly hampered. The investigator can profit from studying procedures and methods of others and after reviewing the field of interest can plot a course of his own. When beginning a research project he needs all the information obtainable on a subject, as quickly as possible. Due to the continuous increase in published articles it has become almost impossible for an individual to remember all of them, even in his chosen field. For this reason a streamlined punch card system has been devised.

This new method is conveniently arranged to handle abstracts, and it fulfills the requirements not only of recording and storing, but also of locating the needed reference promptly. A condensed abstract of up to 200 words is typed on a card (Fig. 1). These

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cards can be had in many sizes and shapes, and in many colors — some plain, others with colored borders or bands for easy identification.\* Key terms are chosen and an appropriate code devised to represent these terms — all are printed around the periphery of the card just inside the rows of perforations. Round, square or oblong perforations can be arranged in from one to four alternating rows around the periphery. Each of these perforations is labeled with either a letter, figure, symbol, or abbreviation. A punch is used to open the space between the desired perforation to the edge of the card — not all cards will have the same holes punched. Care must be used to execute this procedure.

\*—E-Z Sort Systems, Ltd., San Francisco

| TOPOGRAPHIC CLASSIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |  |  |  |  |  |  | SUB TOPICS |  |  |  |  |  |  |  |  |  | ETIOLOGIC CLASSIFICATION |  |  |  |  |  |  |  |  |  | SUB ETIOL |  |  |  |  |  |  |  |  |  | EXTRA |  |  |  |  |  |  |  |  |  |
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| DeGowin, E. L., Hodges, R. E., Hamilton, H. E. and Evans, T. C. #176                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |  |  |  |  |  |            |  |  |  |  |  |  |  |  |  |                          |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |
| Thyrototoxicosis treated with small repeated doses of radioiodine.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |            |  |  |  |  |  |  |  |  |  |                          |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |
| Arch. Int. Med. 104:133/959, 1959.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |            |  |  |  |  |  |  |  |  |  |                          |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |
| A series of 338 patients with thyrototoxicosis was treated with average administered doses of 5.6 mc I-131 and observed at 2-month intervals for at least 6 months after the euthyroid state had been attained or until permanent myxedema from therapy had been demonstrated. Control of the disease was achieved in 60% of the patients with a single dose and in 86% with 1 or 2 doses. The over-all incidence of permanent myxedema was 9.1%. One patient developed thyroid storm during treatment. No instances of radiation thyroiditis were observed. These results compare favorably with those of other series of patients treated with higher average doses of radioiodine. |  |  |  |  |  |  |  |  |  |            |  |  |  |  |  |  |  |  |  |                          |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |       |  |  |  |  |  |  |  |  |  |
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Figure 1. Punch card portraying codification.



By holding a one-to-two inch stack of cards (always with the diagonal cut at the upper right corner) and inserting a probe in a hole, and with a slight shake the punched cards will drop out. The same procedure can be repeated with the dropped cards and after a few times any group or even a single card can be sorted out. No cross indexing is necessary — no misfiling possible. Any one or more of the following categories can be used when sorting.

The topographic and etiologic divisions are coded according to the Standard Nomenclature of Diseases and Operations (SNDO) which is readily adaptable to the use of punch cards — the first two digits only being used. For example, to catalog all references to thyroid, it must be remembered that thyroid gland is in the endocrine system which has the number of eight in the SNDO, and the thyroid gland is the first subdivision and carries the number one. Therefore, to record all references to thyroid, number eight must be punched in the topographic and number one in the subtopic classifications.

The etiologic classification is done on exactly the same principle, i.e., diseases due to disorders of metabolism, growth or nutrition, as number seven in the etiologic division and number seven in the subtopic, denoting that the cause is undetermined.

References can also be coded according to authors with attention centered on the first two letters of the surnames of both the first and second authors. A simple code of numbering each letter of the alphabet is used. Those letters in the first half of the alphabet can be coded according to their relative position, by either a single number or combina-

tion of numbers seven, four, two, and one. The last half of the alphabet can be coded with the same numbers but preceded by the letter "M."

All references pertaining to a particular isotope can be recorded by using a combination of proton number and atomic weight. For example, iodine has a proton number of fifty-three. Therefore, the numbers four and one (five) in the "tens" section must be punched; and two and one (three) in the "units" section. Iodine has atomic weights from 120 to 139. Thus, iodine<sup>131</sup> would be number one in the "hundreds" section and two and one (three) in the "tens" section, and number one in the "units." Whenever there are two perforations, made in a single section, which are to be added together, the letter V is also punched to indicate this addition. In this manner all references to iodine<sup>131</sup> can be recorded.

To code work published in a particular year, e.g., 19(59) numbers four and one (five) must be punched out in the first section of "year of publication" and seven and two (nine) in the second section.

A reprint file number can be typed in a corner of the card.

This method has been used with satisfaction in the Radioisotope Service. It also has its place in a "Meddoctor's" office. Many other combinations can be devised, limited only to the ingenuity of the user, to have references drop into your lap according to your needs.

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"The treatment of disease may be entirely impersonal; the care of the patient must be completely personal . . . The science of medicine must include awareness of the individual." (Dr. Francis Peabody).

# Population Control

PAUL M. BANCROFT, MD  
Lincoln, Nebraska

**T**HE leaders of the United Presbyterian Church in the Synod of Nebraska recently expressed concern over the "population explosion." They instructed a committee to explore the need for "permissive" legislation that might provide more instruction and make more convenient the means of birth control.

## Nebraska Law and Birth Control

There is no statute providing for contraception, only a law prohibiting "any secret nostrum, drug, or medicine for the purpose of preventing conception."

There is no provision for voluntary sterilization.

There is no law providing for the induction of an abortion except "to preserve the life of the mother."

To date no doctor or pharmacist has been brought into court for advising or providing the means for contraception. There is, then, no precedent in the statutes or in the "common law" of Nebraska that affects the means of population control.

So far as modern contraception is concerned, Nebraska may be said to have no law. Knowing this, it is not remarkable that church leaders would suspect that there is a need for legislation.

If there is need for more widespread utilization of birth control, are the professional groups immediately concerned with this problem seeking permissive legislation?

Doctors indoctrinated in the Catholic Church are instructing families in the use of the "rhythm method." They are seeking no legislation.

Non-Catholic doctors are commonly prescribing a variety of methods for birth control and have encountered no difficulty in accomplishing sterilization when this

procedure is indicated. Physicians are not seeking legislation.

Sociologists, hospital administrations, or pharmacists have no legislation to propose.

Attorneys have emphasized that if it is freedom to act that is desired, then the greatest legal freedom exists when there is no law. They point out that the concept of permissive legislation is a trap for the unwary. In defining what is to be permitted the law must set up limits beyond which one may not go. All permissive legislation is, then, restrictive in effect. Freedom to act may be more hampered than helped. The legal profession is seeking no such legislation.

## The Church and Public Opinion

Although not presently seeking legislation, all professional groups recognize the need for an informed public. The church can serve this end using its capability from the pulpit, through the written word, and through personal and family counselling. Perhaps church leaders least appreciate the power of our religious bodies.

Recent studies in the Department of Sociology of the University of Nebraska reveal a high utilization of contraceptives by those who attend church. Also studies at the University of Indiana show that premarital intercourse occurs half as frequently among girls devoted to a church as among girls without such a relationship. To be sure more than one factor is involved, but few would deny that the church does influence the lives of people.

Some medical schools are church sponsored. Many hospitals are church owned and operated. Under these circumstances administrative codes clearly define what the staff may teach and do in the field of birth control. Publicly owned colleges, hospitals and clinics have similar codes which reflect

directly what is believed to be the public will, that is, the religious views of all groups in the community. The church directly or indirectly controls what is done in the community toward the control of population.

### **Changing Public Opinion**

Two United States experts on birth control were recently received by Pope Paul VI in a private audience. (Medical World News, February 12, 1965). They were at the Vatican to outline for an Ecumenical Council Committee the reasons why the annual population growth of 3 per cent in parts of Latin America defeats the purpose of aid programs. While there has been no official change in Rome's position, the evident interest in birth control has had an influence on Catholics.

Liberal members of the Catholic hierarchy have been outspoken. The Reverend Arnold McMahon, Roman Catholic Priest, Birmingham, England, has recently said, "Not only do many Catholics use contraceptives . . . I believe they have the right."

Protestant denominations have reacted. The Second Biennial Convention of the Lutheran Church of America adopted the following statement: "Husband and wife are called to exercise the power of procreation responsibly before God . . . This implies planning their parenthood in accordance with their ability to provide for their children . . ."

The effect of these and many similar utterances is remarkable. A Gallup poll in 1963 revealed that 53 per cent of Catholics favored the dissemination of information about birth control. Only two years later 78 per cent expressed this view. This figure is only slightly lower than that for Protestants which was 82 per cent. For all faiths it was 81 per cent. For many reasons, one of which is the stand of the churches, the great mass of people favor a public informed about population control.

### **Response to Public Demand**

Under federal law and under directives from administrative departments of the fed-

eral government, licensed pharmacists are selling, "over the counter," approved contraceptive devices and pharmaceutical products. These are readily available, of low cost, and are widely used.

Most of contraception falls in the field of medical practice. A physician's response to the problems involved will depend first upon his religious indoctrination. If he is Catholic he may recommend only the "rhythm method." The passage of civil laws, the pressures of his clientele, or of his professional confreres may not change his attitude. Non-Catholic physicians are generally prescribing contraceptive measures in response to requests of their clientele and in harmony with the expressed approval of the American Medical Association which recently adopted this four point statement:

1. "An intelligent recognition that the problems that relate to human reproduction, including the need for population control, are more than a matter of responsible parenthood; they are a matter of responsible medical practice.

2. "The medical profession should accept a major responsibility in matters related to human reproduction as they affect the total population and the individual family.

3. "In discharging this responsibility, physicians must be prepared to provide counsel and guidance when the needs of their patients require it.

4. "The American Medical Association will take the responsibility of disseminating information to physicians on all phases of human reproduction."

Under the influence of more liberal views adopted by religious bodies, the demand of their clientele, approval of the American Medical Association, most doctors are advising contraception.

Permanent sterilization frequently involves hospitalization. Such procedures come under the regulation imposed upon the physician by the rules of the hospital administration. Immediately the power of the church is felt. In the Catholic hospital these procedures are rarely permitted.



The Lutheran Hospital Association of America has recently made public a preliminary draft of a proposed ethical guideline for member hospitals. Opposition to sterilization, voluntary or otherwise, was voiced as an "unwise rejection of reproductive powers." But, it added, "Even so, the Lutheran Hospital will not deny its facilities to patients who remain convinced, despite earnest counsel to the contrary, that such a procedure is, for them, a responsible exercise of their own free will . . ."

Recently the Bryan Memorial Hospital of Lincoln, operated by The Methodist Church, has liberalized its rule relative to sterilization. In the past sterilization has been permitted in the presence of certain "hereditary diseases," certain "conditions in the mother," conditions in either parent preventing them "functioning as adequate parents," and "multiparity." To this is now added "socio-economic considerations that threaten the integrity of the family." This represents a striking change in the attitude toward sterilization and meets many problems that have particularly troubled the church, social workers, and welfare agencies.

The activities of private agencies, such as, The Planned Parenthood Federation of America and the Public Affairs Committee are noteworthy.

The Amalgamated Laundry Workers Union of New York, in a co-operative program with "Planned Parenthood," is making available to its members at no cost not only information but devices for birth control.

Private agencies need to be encouraged to become active in this field for they are less hampered than tax supported agencies.

Although tax supported agencies are restricted by the limitations imposed by religious groups represented in the society, still it is significant that our State Department is quietly offering training and research assistance in population control to the underdeveloped countries receiving our assistance. It is also noteworthy that federal funds are being made available in Corpus Christi, Texas; Milwaukee, Wisconsin, and the District of Columbia, to aid com-

munity birth control programs. In Chicago, the City Board of Health has approved a program to provide both information and birth control devices to any person in the city, under the designation of "family planning."

### Conclusion

A survey of members of the sociological, legal, pharmaceutical and medical professions has failed to reveal any planned legislation dealing with population control. All expressed concern about the difficulties of securing a legislative sponsor or favorable legislative action in a state which is estimated to be one-third Catholic. The legal profession fears that if permissive legislation were sought, restrictive legislation would result that would hamper the cause of population control. All professional groups recognize and feel the need of the exploitation of the power of the church to mold public opinion.

The church must concern itself about the family, particularly the childless, those who produce defective children, and those who have too many. The church has a rightful interest in legislation affecting the family. As Samuel W. Witwer, attorney, has said, "you cannot separate religious conscience from politics." In a word of warning, Robert L. Gildea, Director of Indiana Methodist Information, has said, "The church can perform valuable service by helping to sustain political dialogue on a responsible level. It should feel free to offer guidance to its membership in making responsible political decisions, but it must not presume to make those decisions for them."

It is evident that much is being done under existing law without bringing a highly controversial subject into the political arena. If and when the professions immediately concerned with birth control seek new laws, the church may properly support this legislative effort.

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"The drug industry spends a significant share of the total (\$18.5 billion on research). Along the way it has achieved protection against polio, pneumonia, diphtheria, and influenza. In the recent past, however, one of the nation's leading pharmaceutical firms found its formulas and processes for broad-spectrum antibiotics had been stolen and sold to Italian drug firms, and the U. S. Government was making many of its purchases from these foreign firms." (From a speech by Hatfield, Governor Mark O.: "A Sense of Purpose.")

# Neurologic Manifestations of Hypoxia

**THIRD INSTALLMENT**  
(Continued from March, 1965)

## CO Intoxication<sup>30, 38</sup>

Carbon monoxide intoxication is one of the most frequent forms of exogenous poisoning and hypoxia. As one of many common, treatable conditions, it too should be high on a diagnostician's "index of suspicions." Not in every patient are there clues to etiology or the source. The patient may present only with a neurologic syndrome, minor or major.

Carbon monoxide intoxication occurs from accidental, suicidal or, rarely, homicidal sources. In pure form, the gas is odorless. It may appear wherever organic (carbon containing) material is burned under conditions of incomplete oxidation. Common sources are:

Heating systems (home, room, water, cooking)  
Wood, coal, oil, gas burning.

Commercial gas (unburned) may contain 2-15 per cent CO.

Gas combustion leaves also CO residual.

Combustion engine

Automobile (exhaust contains 7-30 per cent CO)

Garage, hangar, boat house.

Power in industry, on farm.

Welding

Oxidation of wet paint in closed atmosphere

Other combustions or conflagrations

In any fire

Accidental burning of organic materials left on stove.

Trash burners

Dynamite explosion

Faulty apparatus or installation and inadequate ventilation are often at fault. Chil-

dren, the mentally retarded, alcoholics and infirm, senile patients may leave gas taps open. Firemen, cooks, bakers, chauffeurs, garage workers, linotypists, welders and furnace repairmen may require special protection.

The toxic effects of CO appear simple. It combines readily with hemoglobin for which it has an affinity over 200 times more than does oxygen. As CO forms carboxy-hemoglobin, such hemoglobin is ineffective to carry oxygen; the individual is deprived of varying percentages of his functioning hemoglobin.

### CO concentration in air of

0.01% eventually saturates 17% Hb

0.02% eventually saturates 20% Hb

0.1% eventually saturates 60% Hb

1.0% eventually saturates 90% Hb

In the average, quiescent adult, the blood-inhaled gas equilibrium is reached in one to four hours. This may be accelerated by exertion, increased respiration, pyrexia, raised humidity, anemia. Other factors equal, children will incur more hypoxic damage from CO than adults.

In an adult, the following approximations are known:

| Percentage of Hb Saturated With CO | Symptoms                                                                                                 |
|------------------------------------|----------------------------------------------------------------------------------------------------------|
| 10-20%                             | None or slight headache.                                                                                 |
| 20-30                              | Headache. Emotional instability impaired memory and judgment; weakness.                                  |
| 30-40                              | Severe headache, weakness, dizziness, confusion, visual dimming, nausea.                                 |
| 40-50                              | More severe symptoms of hypoxia with high frequency of collapse, coma. Increasing pulse and respiration. |
| 50-60                              | Coma. Convulsions. Cheyne-Stokes respiration.                                                            |
| 60-70                              | Coma. Convulsions. Medullary depression imminent.                                                        |



|       |                                                                               |
|-------|-------------------------------------------------------------------------------|
| 70-80 | Grave respiratory and vasomotor (medullary) depression. Death in a few hours. |
| 80-90 | Death in less than 1 hour.                                                    |
| 90+   | Death in a few minutes.                                                       |

Inhaling 2-5% CO leads to death commonly in a few minutes.

0.4% CO leads to death commonly in 1 hour.

0.2% CO leads to death commonly in 4-5 hours.

The maximal allowable concentration in industry has been set at 0.01 per cent (100 parts per million by volume), for not over 8 hours exposure.

The blood of cigarette smokers often contains 5-10 per cent carboxyhemoglobin concentration. At busy traffic intersections, air concentrations of 0.0015 to 0.0036 per cent CO are not unusual, occasionally rising to as high as 0.0093 per cent. One study in automobiles demonstrated two per cent to have over the safe limit of 0.01 per cent of CO in the driver's compartment. In closed environments (e.g. submarine) tobacco smoking may increase CO in excess of safe levels.

Smoke and other irritating contaminants inhaled with CO intoxication may aggravate respiratory difficulty.

With wide variations in concentration occurring, one observes the entire spectrum of hypoxic effects among patients with CO intoxication. In 65-80 per cent of patients, symptoms short of coma appear, commonly and readily reversible, presenting the gamut from headache through mental confusion or psychosis.

Cyanosis does not occur with uncomplicated CO intoxication. Rather the patient's skin reveals a diagnostically bright pink hue.

The *delayed encephalopathy* or "pseudo-recovery" phenomena of hypoxia are not rare with severe CO intoxication. *Peripheral neuropathy* (isolated or multiple mononeuropathy or polyneuropathy) appears to be a particular, unexplained feature of CO poisoning, noted during recovery.

*Myocardial infarction* may appear also in the first week of recovery.<sup>34, 39</sup>

Prognostic data have been described thus:

Correlate with severe toxicity:

Neurologic signs

Cheyne-Stokes respiration

Blood carboxyhemoglobin over 50 per cent

Exposure over three hours

Impaired breathing

Coma over 20 hours in adult under age 50

(11 hours if over 60)

usually bespeaks incomplete clinical recovery at best.

Progressive EEG deterioration or prolonged flat tracing correlate with grave prognosis.

Serial EEG tracings indicating rapid (within first few days) return to normal correlate with good prognosis.

With markedly abnormal EEG's in first week, 15 per cent of patients recover fully 40 per cent die.

With normal or near normal EEG's in first week

60 per cent recover fully

None die.

"Chronic CO intoxication" is a diagnosis which implies either:

1. Recurrent acute although mild CO poisoning.
2. Longstanding (persistent) mild CO poisoning.

In either case, mild hypoxia occurs to the same extent it might with altitude or blood loss. Up to 20 per cent carboxyhemoglobin (COHb) saturation, symptoms vary widely among individuals and are subjective. Up to 50 per cent COHb saturation, symptoms and signs are commonly reversible.

In a recent, carefully controlled study it was demonstrated that:

On exposure to 0.01 per cent CO (100 parts per million, highest permitted in industry), a 20 per cent hemoglobin saturation could be attained.

Only one patient of 49 complained of subjective distress (headache) at 20 per cent COHb. No physiologic signs could be detected at this level.

However, sensitive psychologic tests might discern diminution of performance at three to five per cent COHb saturation.

It is possible (although not proven) that a human *recurrently* exposed to CO sufficient to just cause mental confusion (over 20 per cent COHb, under 30 per cent COHb) might eventually lose cerebral neurones to the extent of permanent disability. It is probable that, *recurrently* exposed to CO sufficient that even brief coma appeared (over 40 per cent COHb), a human would lose

gradually cerebral neurones to a permanently disabling degree.

Longstanding (truly *chronic*), more or less mild, CO intoxication would be equivalent to continuous or near continuous living in a hypoxic state, (again) as one might endure at altitude. Here adaptation appears usually possible, up to a point.

"Chronic" CO intoxication thus presents a problem of careful definition and often, in medicolegal problems of cause and effect, scrupulous proof (air and blood tests for CO concentration). The symptoms of hypoxia and some of their objective correlates appear established. The ability of humans to tolerate mild hypoxia (giving a pint of blood, altitude of 12,000 feet, 20 per cent COHb) and rebound from this rapidly without sequelae is also known.

Treatment of CO intoxication consists of oxygen administration. In the critically afflicted, this had best be given under three atmospheres' pressure; hypothermia appears useful to prevent neuronal and endothelial damage and cerebral edema. Exchange transfusions have also been employed.

#### ANESTHESIA<sup>40</sup>

The anesthesiologist's concerns are:

1. To protect the patient from intolerable distress (particularly pain) of a diagnostic or therapeutic procedure.
2. To render the patient to the surgeon in such condition that he may proceed with maximal efficiency.
3. To maintain efficient functioning in the many physiologic areas which may be disturbed by anesthesia or surgery and to conduct the patient safely through the recovery and immediate postoperative period.

Anesthesia may initiate or aggravate hypoxia in a number of ways, namely, by producing or helping to produce:

- Convulsions with general anesthesia
- Cardiac arrest
- Deficient oxygen inhalation
- Respiratory tract obstruction
- Excessive depression of vital centers
- Hypotension
- Muscle paralysis
- Positioning of unconscious patient
- Hypercapnia
- Hypocapnia

Pyrexia

Pulmonary complications (atelectasis, pneumonia, edema)

In addition the anesthesiologist shares with the surgeon special problems which arise in thoracic, cardiovascular and brain surgery, in severe hemorrhage and in emergency surgery.

Ventilation during anesthesia is a major challenge today because of:

Increasing frequency of major thoracic and cardiovascular surgery.

Continued use of agents which depress medullary respiratory and vasomotor centers.

Use of muscle relaxants.

Use of controlled hypotension.

Surgery on more severely ill or elderly patients.

It is evident, too, that often hypoxia begets hypoxia — setting off other disturbances which aggravate or produce more hypoxia.

*Convulsions with anesthesia* comprise an uncommon but critical complication, often precipitated by hypoxia and then contributing to the continuance and aggravation of hypoxia. It appears unlikely that one factor alone precipitates these seizures. Two or more of the following are usually discerned:

Hypoxia (Any cause. Commonly airway obstruction, oxygen-poor inhalation, decreased vital capacity).

Hypercapnia

General anesthesia (especially divinyl or ethyl ether).

Pyrexia (infection, overheated)

Overhydration; dehydration

Patient is child or adolescent

Excessive premedication

Deep anesthesia, rapidly induced

*Cardiac arrest* will be discussed later under a separate heading as this may occur also in circumstances other than surgical and anesthetic.

*Deficient oxygen inhalation* is commonly due to defects in anesthetic apparatus or its use:

Obstructed tubes, valves, masks (including endotracheal tubes)

Wrong mixtures, with insufficient oxygen.

The possibilities for hypoxic mixtures or obstructed conduction increase in direct proportion to the complexity of anesthetic ap-

paratus.<sup>41</sup> Abnormalities of respiratory rate, rhythm or depth may effect inadequate oxygen inhalation.

*Respiratory tract obstruction* may occur at any level, oral or nasal to bronchiolar.<sup>42</sup> Common are:

- "Faulty management of airway"
- Aspiration of gastric contents (vomit)
- Mechanical obstruction
- Bronchial edema
- Bronchospasm
- Rarely:
  - Cardiac arrest
  - Atelectasis
  - Pneumonia
- Laryngospasm
- Trauma to larynx and subglottic tissues (Edema)
- Anatomic relaxation of tongue and pharyngeal muscles.
- Excessive bronchial secretion
- Aspiration of saliva, nasopharyngeal secretions
- Aspiration of blood
- Neck flexed
- Anatomic defects or lesions of respiratory tract.

*Excessive depression of vital neural centers* or pathways related to respiratory and cardiovascular function may produce significant and prolonged *ventilative insufficiency* ("hypoventilation") and *hypotension* or both.

This includes depression of:

- Medullary centers
- Stretch receptors, baroreceptors
- Carotid and aortic receptors
- Chemoreceptors
- Myocardium
- Adrenergic system

Prolonged stimulation of pulmonary stretch receptors during positive-pressure, controlled breathing may interfere with automatic rhythmicity of Hering-Breuer reflexes. Apnea occurs.

The following disturbances may contribute to hypoventilation or hypotension:<sup>43</sup>

- Hypercapnia
- Hypocapnia
- Hypoxia (begets hypoxia)
- Excessive anesthesia
- Excessive or summing pre- and postoperative medications
- Positive pressure, controlled respiration

- Intracranial or high cervical disease, injury, surgical operation
- Hypothermia (especially infants)
- Water intoxication

*Hypotension* in anesthesia may occur inadvertently from peripheral vasodilation; from diminished cardiac output, hemorrhage or reduced venous return to heart; or as a planned and controlled means of hemostasis.<sup>43a</sup> Besides risks of hypoxic damage to cerebral neurones, one must recall the less common although not rare damage incurred by myocardium and kidneys.

Severe and sudden hypotension may induce vicious cycle to cause ischemic hypoxia of medullary centers, thence apnea, hypoventilation or even cardiac arrest. Risks to cerebral flow may be offset by head down position where the patient has been transiently "released" to orthostatic hypotension.

Inadvertent hypotension during and following surgery may also be associated with the following factors:<sup>44</sup>

- Withdrawal from steroids
- Antihypertensive drugs
- Tranquilizers or antidepressants with hypotensive side-effects
- Excessive pre-anesthetic sedation
- Deep anesthesia
  - Overdosage
  - Prolonged anesthesia
- Certain anesthetics more likely to produce hypotension
- Sympathetic blockade, drugs or procedures
- Rapid absorption of local anesthetic
- Bacteremic shock
- Body position or surgical manipulation retarding venous return
- Stimulation of autonomic nervous system by surgical procedure producing vasodepressor effects.
- Hypovolemia (hemorrhage)
- Cardiac arrhythmias
- Myocardial disease

*Respiratory muscle paralysis* has appeared with new chemotherapies. The surgeon's requirement for muscle hypotonus and the anesthesiologist's need for controlled pulmonary ventilation have brought curare-like drugs into use. These require finesse that:

Optimal relaxation is attained without critical respiratory muscle paralysis.



When respiration is paralyzed, skilled ventilatory assistance is provided.

Controlled relaxation or paralysis be maintained for only the duration necessary.

Problems arise with:<sup>45</sup>

Individual responses, thresholds.

Excessive doses of neuromuscular block drugs.

Summation of several different drugs which induce neuromuscular block.

Summation of hypoxia from this source of respiratory insufficiency plus hypoxia of other origins.

Severe hyperkalemia, hypokalemia.

Rare patient with occult or overlooked myasthenia gravis.

Rarely the patient with a genetic cholinesterase enzyme defect (atypical pseudocholinesterase) is detected by the use of depolarizing muscle relaxants for he demonstrates a markedly prolonged neuromuscular block from doses ordinarily within safe limits. Similar difficulties may appear in cachectic patients or those with anemia, liver disease, some lung carcinomas, renal insufficiency, lower motor neurone disease, myotonias.

Several antibiotics, outstandingly neomycin, when absorbed rapidly in quantity, produce neuromuscular block and especially under anesthesia. Streptomycin, kanamycin, polymyxin-B and some cytotoxic drugs have also been suspect.

The accidental administration of, or exposure to excessive cholinergic drugs (e.g. neostigmine or certain insect sprays) must be considered.

The common problems presented in all of these situations concern prolonged (post-operative) apnea or hypoventilation.

*Malposition* of or manipulation within the anesthetized patient may contribute to or cause significant hypoxia:

Patient's head elevated with hypotension

Impeded venous flow

Vena cava block

Venous pooling

Pressure on neck

Arteries, veins

Larynx, trachea

Thoracic impairment

Marked head-down tilt

Lying on abdomen

Abdominal distention

## Intrathoracic surgery

### Compression

*Hypercapnia* ( $\text{CO}_2$  retention or respiratory acidosis) depresses central respiratory activity and consciousness. Instead of providing an immediate pulmonary response to clear out accumulated  $\text{CO}_2$ , medullary centers become dulled. Hypoventilation ensues. Hypoventilation begets hypoventilation. Re-breathing expired air may also lead to hypercapnia as may inhaling an erroneous mixture containing excessive  $\text{CO}_2$ .<sup>46</sup>

*Hypocapnia* (respiratory alkalosis) is commonly due to overbreathing; to an excessive respiratory exchange which washes out and thus diminishes the amount of  $\text{CO}_2$  in the blood stream. Such hyperventilation may be caused by:

Craniocerebral injuries (decerebrate rigidity, lesions of pontine tegmentum)

Emotional states

Assisted respiration

Hypoxic stimulus

Hyperpyrexia

Metabolic acidosis (e.g. salicylate intoxication)

Hepatic failure

Hypocapnia is a mixed blessing in anesthesia. It may assist to reduce increased intracranial pressure; it may extend the effects of general anesthesia. Anesthesiologists prefer to err on the side of hypocapnia rather than hypercapnia during anesthesia. Cerebral arteriolar and capillary constriction occurs with hypocapnia but to date no one has demonstrated that such constriction produces important hypoxia in the human brain.

It should be recalled however that patients with bilateral supramedullary cerebral disease may demonstrate prolonged apnea on hyperventilation. (Likewise swimmers who hyperventilate prior to underwater exertion may lose the normal, urgent air hunger that saves their lives).

Undesirable cardiac arrhythmias may appear with too precipitous change from hypercapnia to hypocapnia. By removing the  $\text{CO}_2$  stimulus to respiration and by dulling the stretch receptors by assisted ventilation, the anesthetist may be confronted with prolonged apnea.<sup>47</sup>

*Pyrexia* aggravates hypoxia by increasing body and cerebral demands for oxygen. The patient under anesthesia often is without normal thermoregulation. Prolonged surgery, a warm operating room and heavy drapes are important factors.

*Postoperative* hypoxia is no rarity, persisting for hours or several days.<sup>48</sup> It may be minor. It may be accompanied by other physiologic alterations which inter-relate or aggravate. Subacute or subclinical hypoxia may be surreptitious, obscured by the postoperative state. When postoperative hypoxia is discerned, effort should be directed to seeking the causes rather than being content merely to ply the patient with oxygen.

### CARDIAC ARREST<sup>30, 49</sup>

*Cardiac arrest* is a descriptive term designating hemodynamic standstill from ineffective myocardial contractions. Commonly this is due to asystole or ventricular fibrillation, rarely to ventricular flutter or severe tachycardia.

The combination of anesthesia and/or surgery plus one or more sudden, major physiologic (or biochemical) disturbances (especially hypoxia) is commonly at fault. It may occur also without the anesthetic or surgical setting, particularly with sudden, severe asphyxia (hypoxia + hypercarbia), acute myocardial infarction, Stokes-Adams conduction block or electrocution accidents (including lightning).

The following factors, often in combination, are considered important in precipitating this grave development:

- Hypoxia
- Hypercapnia
- Hypotension
- Overdose of medication
- Cardiac or pulmonary disease
- Rapid blood loss
- Massive blood transfusion, especially cool, stored blood
- Excessive sympathetic and/or vagal stimulation as with surgery of eyeball, gall bladder, heart, lungs, carotid artery.
- Rapid induction or excessive depth of anesthesia
- Hypothermia

Occasionally introduction or removal of

an endoscope or visceral handling in presence of hypoxia and/or hypercapnia may trigger cardiac arrest. It may occur more frequently at induction of or emergence from anesthesia. It has occurred in the post-anesthetic period.

Incidence is also increased by:

- Emergency surgery
- Extremes of age
- Other physiologic or biochemical liabilities

Cardiac arrest is an important complication of hypoxia. Besides respiratory resuscitation then, the hypoxic patient may need also cardiac massage.

Cardiac arrest requires immediate cardiac massage, relief of hypoxia and, in critical situations, hypothermia to protect cerebral neurones. Metabolic acidosis often develops and may become severe enough to require therapy lest it contribute to myocardial failure, respiratory depression, or peripheral vascular collapse.

### ALTITUDE<sup>50</sup>

As high altitude travel and space probes become more common, medical attention has turned to problems of low partial pressure hypoxia at altitude. Individuals with a variety of disabilities may travel. Even by automobile one commonly may ascend mountainous heights of 7000-8000 feet. (The altitude of Mexico City is 7300 feet). Mountain climbers will greatly exceed this. Cabin pressures of modern, high-altitude jet flights are often in the range of 5000-8000 feet. In this hemisphere, people live and work at altitudes of 13,000-16,000 feet in Peru, Chile and Bolivia.

Variously at 5000-7000 feet, a few individuals begin noting subjective discomforts of hypoxia. Most persons will develop symptoms somewhere between 7000-15,000 feet. A remarkable few remain without symptoms at 15,000 feet but this appears to be the upper limit, without time for adaptation. The great individual variation awaits explanation.

Physiologic adaptation occurs when time is allowed. This is readily attained at lower altitudes (e.g. 7000-9000 feet) but be-

comes less certain, complete and enduring as 18,000 feet altitude is approached.

Remaining at the upper limits of tolerable altitude (over 9000 feet) some individuals continue to suffer with *subacute altitude sickness* due to hypoxic effects on the central nervous system. Some incur bouts of *pulmonary edema* which may compound hypoxia critically. *Chronic altitude sickness* occurs in those who develop alveolar hypoventilation and diminished respiratory response to CO<sub>2</sub>. Cyanosis, polycythemia and other features of chronic CO<sub>2</sub> narcosis appear in these patients.

On attaining 8000-10,000 feet altitude within a few hours, most individuals note symptoms plus beginning mental defects of hypoxia.

Higher intellectual functions (such as complex decision making) and night vision are impaired in some individuals at altitudes just over 5000 feet. At 15,000-20,000 feet, mental defects are often considerable.

Over 20,000 feet unconsciousness supervenes shortly. At altitudes over 35,000 feet, sudden decompression (e.g. of aircraft cabin) permits only an average of 15 seconds consciousness. As 18,000-20,000 feet altitude is approached, decompression of body fluids may occur.

At altitude of 18,000 feet air pressure is only half of that at sea level; at 27,500 feet, only one-third.

The following information is of interest:

At 10,000 feet altitude arterial oxygen saturation is 85-90%

At 13,000 feet altitude arterial oxygen saturation is 82%

At 15,000 feet altitude arterial oxygen saturation is 77%

At 18,000 feet altitude arterial oxygen saturation is 60-70%

At 25,000 feet altitude arterial oxygen saturation is 45%

At 30,000 feet altitude arterial oxygen saturation is 21%

At 35,000 feet altitude arterial oxygen saturation is 10%

#### END THIRD INSTALLMENT

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The idea of having children by choice instead of by chance is more widely accepted today than ever before. And for all religious creeds there are acceptable methods of family planning to guarantee each child his "first birthright" — to be wanted. (A New Chapter in Family Planning, a public affairs pamphlet just released discusses the latest developments in both attitudes and methods. If you are interested, you may get a copy by writing Public Affairs Committee, a nonprofit educational organization at 381 Park Avenue South, New York, N. Y. 10016. Send 25 cents).



## Coming Meetings

### CRIPPLED CHILDREN'S CLINICS—

- April 3 — Broken Bow, Elks Club
- April 10 — Alliance, Central High School Building
- April 24 — McCook, St. Catherine's Hospital
- May 1 — Kearney, Good Samaritan Hospital
- May 22 — Falls City, Elks Club

### ACOG ANNUAL CLINICAL MEETING —

The American College of Obstetricians and Gynecologists will hold its 13th Annual Clinical Meeting, Sunday-Thursday, April 4-8, 1965, at the Civic Auditorium in San Francisco.

### AMERICAN INDUSTRIAL HEALTH

CONFERENCE — April 5-8, 1965; American Hotel, Bal Harbour, Miami Beach, Florida, Industrial Health Conference, 55 East Washington Street, Chicago, Ill. 60602.

### GILL MEMORIAL EYE, EAR AND

THROAT HOSPITAL — Thirty-eighth Annual Spring Congress, Roanoke, Virginia, April 5 through 8, 1965, at the hospital.

### AMERICAN SOCIETY OF CLINICAL

PATHOLOGISTS — Interim meeting; Dallas, Texas; April 21-25, 1965.

### AMA SECOND ANNUAL CONGRESS ON ENVIRONMENTAL HEALTH —

Drake Hotel, Chicago, April 26-27, 1965.

### AEROSPACE MEDICAL ASSOCIATION —

36th Annual Scientific Meeting; April 26-29, 1965; New York Hilton Hotel, New York. Info: William J. Kennard, MD, Aerospace Medical Association, Washington National Airport, Washington, D.C. 20001.

### THE 14TH HAHNEMANN SYMPOSIUM

titled "Mechanisms and Therapy of Cardiac Arrhythmias" will be held at the Sheraton Hotel, Philadelphia, April 26-29, 1965. Contact Leonard Dreifus, MD,

Program Director, Hahnemann Medical College and Hospital, 230 North Broad Street, Philadelphia 19102.

### INTERNATIONAL AND FEDERATION

CONGRESSES — 1965 Las Vegas, Nevada, April 25-29. North American Federation, 1965 Helsinki, Finland; European Federation, June 16-19.

### AMERICAN ACADEMY OF PEDIATRICS

—Spring Session; April 26-29, 1965; Americana Hotel, Bal Harbour, Florida. Info: American Academy of Pediatrics, 1801 Hinman Avenue, Evanston, Illinois 60204.

### NEBRASKA STATE MEDICAL ASSOCIATION —

97th Annual Session, April 26 to 29 inclusive, 1965, Sheraton-Fontenelle Hotel, Omaha.

### PUBLIC HEALTH AND MEDICAL,

CHEMICAL AND BIOLOGICAL DEFENSE COURSE — To be given at the U. S. Army Chemical School at Fort McClellan, Alabama, on April 26-30, 1965.

### NINTH POSTGRADUATE COURSE IN

TRAUMA — Sponsored by Chicago Committee on Trauma, ACS; April 28, 29, 30, 1965; John B. Murphy Memorial Auditorium, 50 East Erie Street, Chicago 60611.

### SOUTHWEST SURGICAL CONGRESS —

Hot Springs, Arkansas, May 10-13, 1965, Velda Rose Towers Motel.

### NEBRASKA HEART ASSOCIATION —

With Nebraska State Health Department; Scientific Session, Omaha, May 16, 1965. Info: Nebraska Heart Association.

### METABOLIC DEFECTS —

The Fifth Annual Postgraduate Seminar of Childrens Memorial Hospital, Omaha, will be held on Friday, May 21, 1965. Guest speakers will be Victor H. Averbach, PhD, and Angelo M. Di George, MD. Further information can be obtained by writing to Carol R. Angle, MD, Childrens Memorial Hospital, Omaha, Nebraska 68105.

AMERICAN CANCER SOCIETY — 1965 Scientific Session — Drake Hotel, Philadelphia, June 16, 1965. Info: Director of Professional Education, American Cancer Society, 219 East 42nd Street, New York 10017.

THE ANNUAL MEETING OF THE AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION — Will be held on August 22-27, 1965, at the Sheraton Hotel, in Philadelphia.

AMERICAN ASSOCIATION OF BLOOD BANKS — 18th annual meeting; Americana Hotel, Bal Harbour, Florida, September 14-17. Info: The Association at 30 North Michigan Ave., Chicago 2.

ANNUAL OTOLARYNGOLOGIC ASSEMBLY of 1965 — Will be held October 30 through November 5, in the new Illinois Eye and Ear Infirmary at the Medical Center, Chicago. The Department of Otolaryngology of the University of Illinois College of Medicine offers a condensed postgraduate basic and clinical program for practicing otolaryngologists under the direction of Doctor Emanuel M. Skolnik. It is designed to bring to the specialists current information in medical and surgical otorhinolaryngology. Info: Department of Otolaryngology, College of Medicine of the University of Illinois at the Medical Center, Chicago Box 6998, Chicago, Illinois 60680.

FIRST NATIONAL CONFERENCE ON AREAWIDE HEALTH FACILITIES PLANNING, AMA — Americana Hotel, Bal Harbour, Florida, November 28-29, 1965.

Future Meetings of the American College of Surgeons—

ANNUAL CLINICAL CONGRESS, October 18-22, 1965, Atlantic City, New Jersey.

— 1966 —

BAL HARBOUR, FLORIDA, January 13-15. Sectional Meeting. Americana Hotel.

HOUSTON, TEXAS, January 31 - February 2. Sectional Meeting. Sheraton-Lincoln Hotel.

CLEVELAND, OHIO, March 14-17. Annual 4-Day Sectional Meeting for Doctors and Graduate Nurses. Sheraton-Cleveland and nearby hotels.

ANNUAL CLINICAL CONGRESS, October 10-14, 1966. San Francisco, California.

For any advance information address: Secretary, American College of Surgeons, 55 East Erie Street, Chicago, Illinois 60611.

THE HAHNEMAN MEDICAL COLLEGE AND HOSPITAL of Philadelphia offers the following Postgraduate Education Courses during 1965 and 1966:

—April 26 - 29, 1965: 14th Hahneman Symposium on Mechanics and Therapy of Cardiac Arrhythmias; Dr. Leonard Dreifus; Sheraton Hotel, Philadelphia.

—July 26-30, 1965: Interpretation and Therapy of Cardiac Arrhythmias; Dr. Dreifus; Hahneman CVI Building.

—November 22-24, 1965; 15th Hahneman Symposium Cancer Chemotherapy; Dr. Isadore Brodsky; Sheraton Hotel.

—December 8-10, 1965: A Hahneman Symposium on New Concepts in Gynecological Oncology; Dr. George C. Lewis; Sheraton Hotel.

—April 20-23, 1966: 16th Hahneman Symposium, Arterial Occlusive Disease; Dr. Albert N. Brest; Marriott Motor Hotel.

—December, 1966: 17th Hahneman Symposium, Nutritional Dysfunction; Dr. Donald Berkowitz; Sheraton Hotel, Philadelphia.

ANIMAL CARE PANEL — 16th Annual Meeting; Sheraton Hotel, Philadelphia; November 15-19, 1965. Contact Mr. Joseph J. Garvey, Executive Secretary, 4 East Clinton Street, Joliet, Illinois 60434.

SECOND NATIONAL SYMPOSIUM ON COCCIDIOIDOMYCOSIS — December 8-9-10, 1965, Del E. Webb Towne House, Phoenix, Arizona. For further information, contact: Arizona Tuberculosis and Health Association, Inc., 733 West McDowell Road, Phoenix, Arizona 85007.



CONTINUING EDUCATION — Closed Chest Resuscitation; University of Nebraska College of Medicine, at Eppley Research Institute, March 8, 1966 (for physicians, 9th for dentists, and 10th for nurses). Info: Continuing Education, University of Nebraska College of Medicine, 42nd and Dewey, Omaha 5.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS — "Vision for the Space Age;" Houston, Texas, Rice Hotel, March 24-26, 1966. Info: Director of Information John D. Coleman, 16 East 40th Street, New York 10016.

## Medicare in Operation

### Care of the Newborn in the Hospital—

Newborn care is authorized under the Medicare Program, if rendered during the period following delivery. This care is listed under *Code 0022* in the Medicare Manual and covers all visits including a complete physical examination. If these services are rendered by the physician delivering the infant, only 50 per cent of the charge is allowable in addition to his obstetrical fee. In multiple births, 50 per cent is authorized for each additional infant. Care of premature infants is based on a separate payment for the first week, plus subsequent payments for each day thereafter the baby is hospitalized. However, the same rule holds true if the delivering physician renders this care, he would be entitled to 50 per cent of the charge.

Consultation is authorized for infant care, providing the services of a consultant are requested by the attending physician. Consultations at the request of the parents are not authorized.

Infant care following hospitalization in the home or office, for checkup, immunizations, et cetera, are not authorized under the program.

## THE MONTH IN WASHINGTON

The American Medical Association supports a five-year extension of the Vaccination Assistance Act.

Dr. James Z. Appel, Lancaster, Pa., president-elect of the AMA, and Dr. Robert C. Long, Louisville, Ky., a member of the AMA board of trustees, presented the AMA's position on the vaccination program and three other health care bills at a hearing of the house commerce committee.

"Medicine, on the national, state, county, and community levels, has consistently worked to bring to its patients the benefit of advances in medical research and development," Dr. Appel said. The physicians of America and the Public Health Service have long been partners in the fight against disease and in the campaign to eradicate contagious disease wherever it is found.

"The Vaccination Assistance Act of 1962 was enacted (with AMA support) in recognition of the fact that there existed all over the country pockets of people, particularly children, who were not utilizing, or who did not have available to them, vaccines for the prevention of poliomyelitis, diphtheria, whooping cough, and tetanus. The Act authorizes grants to the states to enable them to engage in a concentrated campaign to provide immunization to people in these pockets. We believe that substantial progress has been made, and we recommend the program's continuation . . .

"Medical research has since (1962) provided an effective vaccine against measles. An intensive vaccination program directed at preschool age children can dramatically lessen the incidence of the disease and reduce or eliminate the serious residual effects which are sometimes attendant with the disease. We therefore believe that it is most fitting that in extending the Vaccination Act, HR 2986 include measles in the authorized vaccination programs."

The AMA also supported a five-year extension of the federal grant program for family health services for migratory workers.

The AMA opposed legislation that would authorize the Public Health Service to construct and operate regional or national research facilities. Dr. Appel said:

"We fail to see how research can be classified as 'regional' or 'national' or 'local.' Re-



search in cancer which may be carried on in a medical school research facility in a mid-western city is as 'national' in character as if it were carried on in a city on the west coast. Research in heart disease, or in any of the many areas of interest to medical science, has no geographic bounds . . .

"We believe that the country will best be served through the utilization of the experience and knowledge of institutions which are currently engaged in medical research. Their record is a good one. We see no reason for beginning a new program which would require many months or years and large sums of money, and which would compete for scarce skilled research manpower . . ."

Dr. Long outlined the AMA's opposition to use of federal matching funds for initial staffing of community health centers.

"We believe that once the center has been constructed, the community should assume the remaining responsibility," Dr. Long said.

"The providing of medical care is essentially a community affair. The federal government's participation in a matching grant program stimulates the start of the local program and helps the state or community overcome the initial heavy financial burden. Most often, the problem initially facing a community is the one-time large construction-cost expenditure. Assistance here, by way of federal matching grants, is, in our opinion, appropriate. The funds for staffing, however, should remain the sole responsibility of the local community. There does not appear to be any justification for federal participation in financing this type of expense, nor is it likely to phase out, as stated in the bill, once the federal government has assumed this responsibility. If the community cannot, or will not, support the program from its beginning years, it is not likely to do so later."

As for legislation that would authorize federal mortgage insurance and loans to help finance the cost of constructing and equipping facilities for the group practice of medicine and dentistry, the AMA said:

"We do not believe that this proposal for

federal subsidy can be justified. Special preference to physicians who will be eligible for the loan or mortgage insurance under this measure can only be supported on the basis that adequate sources of financing do not exist through banks, insurance companies, and other agencies. We know of no such evidence. It has not been demonstrated that this legislation is required to expand currently available public or private funds to finance or insure the construction and equipping of medical or dental groups . . .

"The bill specifies that the surgeon general shall give preference to, in effect, closed panel prepaid group health plans. This priority discriminates against other physicians in private practice either as solo practitioners or in partnership or groups."

The AMA also has emphasized to Congress that the Johnson Administration's plan for a network of regional medical complexes could have "significant impact" upon the practice of medicine in the United States.

Dr. F. J. L. Blasingame, executive vice president of the AMA, advised Sen. Lister Hill (D., Ala.), chairman of the senate labor and public welfare committee, that the AMA could not testify on short notice on S 596, the "Heart Disease, Cancer and Stroke Amendments of 1965."

Despite the far-reaching potentialities of the legislation, Hill unexpectedly called two days of hearings on short notice in February.

Blasingame said in a letter to Hill:

"We regret that we found it necessary to inform you that we could not present the Association's views at that time. Because of the short notice given of the hearings, it was not possible to accord this important legislation the proper measure of consideration which it warrants.

"We are sure that this committee must appreciate the tremendous significance of the legislation before it. The purpose of it, namely to assist in combating heart disease, cancer and stroke, and other major diseases, are most laudatory. The eradication or control of such diseases, as well as of all other

medical afflictions of man, has been, and continues to be, an active concern and goal of medicine.

"We deem it imperative that S 596 be given consideration commensurate with the significant impact which it could have upon the course of medicine and upon the health needs of our citizens.

"The Association has initiated steps within its organization to give S 596 a most careful analysis of its intent and the manner in which it is sought to be implemented and achieved. We cannot urge too strongly to this committee that this legislation raises considerations with far-reaching ramifications and with a potential of far-reaching effects upon the nation's health needs. The course to be charted must represent the most judicious employment of the nation's medical resources."

The bill would amend the Public Health Service Act by adding a new title which would authorize the appropriation of \$50 million for fiscal 1966, and such sums as may be necessary for the next four years, to be used as grants to assist public or private nonprofit universities, medical schools, research institutions, and other public or nonprofit institutions and agencies in the planning, establishing, and operating of regional medical complexes for research and training and for demonstrations of patient care in the fields of heart disease, cancer, stroke, and other major diseases.

The Administration has refused to give Congress the total amount of planned expenditures on the program, if it is approved by Congress, over the five-year period. But Administration sources estimated \$1.2 billion when the legislation was introduced.

President Johnson has named Dr. Luther L. Terry for another four-year term as surgeon general of the Public Health Service.

A 53-year-old native of Alabama, Terry has been with the PHS since 1942 when he became assistant director of the National Heart Institute. The late President Kennedy appointed him surgeon general in 1960. (From Washington Office, AMA).

## PROCEEDINGS BOARD OF COUNCILORS

### Nebraska State Medical Association

February 21, 1965

The interim Session of the Board of Councilors was held Sunday, February 21, 1965, at the Fort Kearney Hotel, Kearney, Nebraska. The meeting was called to order by the Chairman, Dr. W. W. Waddell.

Members present were Drs. Leroy W. Lee, Omaha; John T. McGreer, Jr., Lincoln; George Salter, Norfolk; H. D. Kuper, Columbus; C. L. Anderson, Stromsburg; Chas. F. Ashby, Geneva; Dan Nye, Kearney; L. S. McNeill, Hastings; C. J. Cornelius, Sidney; and R. E. Garlinghouse, Lincoln, President.

Others present were Drs. K. S. J. Hohlen, Lincoln; J. P. Gilligan, Nebraska City; Chas. Landgraf, Jr., Hastings; Warren Bosley, Grand Island; Horace Shreck, Hastings; Horace Giffen, Omaha, and E. A. Rogers, Lincoln.

Dr. Waddell called for nominations for Chairman of the Board of Councilors. Dr. McGreer moved that Dr. Waddell be re-elected and that a unanimous vote be cast. The motion carried.

Nominations for Secretary of the Board of Councilors were called for and Dr. Lee moved that Dr. Raines be nominated. This was seconded by Dr. McGreer and carried.

The Chairman called for approval of the Annual Session minutes as printed in the July, 1964 Journal. Dr. McNeill moved that these minutes be accepted as printed. The motion carried.

Dr. Hohlen, Chairman of the Council on Professional Ethics, was asked to present his oral report to the Councilors. The various complaints and the decision of the Council on Professional Ethics relative to these complaints were presented. Dr. Hohlen stated that in view of the fact that a good many of the County Medical Societies had their own committee on professional ethics, his committee would like to suggest the possibility of the Council on Professional Ethics being an appeals committee, with the work being referred to the local committee of the county medical societies.

Dr. Shreck, Chairman of the Sub-Committee on Athletic Injuries, was asked for any additional comments he would like to make. Dr. Shreck called attention to the Chart which the committee had developed to be used as "Guidelines for Physicians on the Pre-season Medical Evaluation for High School Athletes."

Dr. Shreck also handed out the Medical Report and Physical Examination Form to the Councilors. He stated that the committee would like to have the Chart and the Medical Record form sent to all physicians in the state and to the Nebraska School Activities Association, if approval is given by the Board of Councilors and the House of Delegates.

Dr. McGreer moved that this report of the Sub-Committee on Athletic Injuries be accepted. This was seconded by Dr. McNeill, and carried.

Dr. Gilligan, Chairman of the Medicolegal Advice



Committee, then presented his oral report to the Board of Councilors.

In the absence of Dr. Hartigan, Chairman of the Medical Service Committee, the Chairman asked Mr. Kenn Neff to review the Legislative bills which are of interest to medicine. Mr. Neff stated that the following bills were sponsored by the Association:

LB 299—Increasing the fee charged by the Health Department for issuing or renewing medical licenses.

LB 335—Increasing from \$15 to \$50 per day the per diem of members of the Board of Examiners for medicine and surgery, and authorizing travel and hotel expense reimbursement.

LB 320—Providing for the suspension of medical and surgical license when the licensee becomes mentally ill or mentally deteriorated, and procedure for reinstatement.

LB 396—Prescribing new procedures and standards for reciprocal licensing in Nebraska of medical doctors and surgeons.

Dr. Waddell then asked for action by the Councilors on these bills. Dr. Anderson moved that these be recommended to the House of Delegates for their approval. Following discussion, this was seconded and carried.

Dr. Garlinghouse was then asked to present to the Councilors the ten points which were submitted for consideration in improving the Kerr-Mills law. They are as follows:

1. Elimination of relative responsibility.
2. Increase, or some type of adjustment, in both the ceilings on income and assets.
3. Elimination of the claim on the estate of the surviving spouse.
4. Inclusion of nursing home and/or convalescent care.
5. Eliminate or decrease deductibles, and increase time from 6-month period to 12-month period if retained in whole or part.
6. Certification by affidavit.
7. Pre-certification of pre-recognition also by affidavit.
8. A flexible ceiling either to replace the above mentioned ceiling or in certain instances to supplement the current ceilings; i.e., a \$6,000 illness in a \$4,000 income family.
9. Remove administration of the law from the Department of Welfare and placing with some other agency such as:
  - a. Department of Public Health
  - b. Blue Cross - Blue Shield
  - c. Commercial Insurance Company
10. Close cooperation with various interested committees in both County Medical Societies and the Nebraska State Medical Association. This would assure that the best possible medical care for the tax dollar would be obtained, that over-utilization would not occur, and physicians who might abuse the plan would be properly disci-

plined. The Nebraska State Medical Association pledges full cooperation should this responsibility be so delegated. The mechanical set-up and the knowledge is already in the State Association to execute these assurances.

Dr. Garlinghouse asked that official action be taken on these ten points. It was moved by Dr. McGreer that these be recommended to the House of Delegates for their approval. The motion was seconded and carried.

Dr. Giffen, Chairman of the Medicine and Religion Committee, discussed the activities of this new committee, and the program to be presented at the Annual Session in Omaha. Dr. Giffen urged that as many physicians as possible attend this program which is to be held at the Civic Auditorium.

Dr. Garlinghouse was granted permission of the floor, and urged that each doctor contact the clergymen in his own community and acquaint them with this program on Medicine and Religion and ask them to be present.

It was moved and seconded to accept this report, and the motion carried.

Dr. Bosley, Chairman of the Maternal and Child Health Committee, called attention to the directory of services for children and youth which is available from the Nebraska Committee for Children and Youth. He stated that the return of the Maternal Mortality Study forms had been very good, and that three of these cases which have been received will be used for an Obstetric Seminar at the Annual Session.

Dr. Bosley read the bill which has been introduced in the Legislature relative to PKU testing. He then read the following resolution:

WHEREAS, the Nebraska State Medical Association is fully cognizant of the importance of early detection of phenylketonuria and other metabolic disturbances in the newborn; and

WHEREAS, the medical profession is also cognizant of the deep concern of the public concerning these diseases; and

WHEREAS, the Nebraska State Medical Association earnestly desires to eliminate to the greatest possible extent any occurrence of these illnesses in the newborn; now, therefore be it

RESOLVED, that the Nebraska State Medical Association recommends that all newborn children be tested for these diseases by the latest acceptable techniques; and

BE IT FURTHER RESOLVED, that the Nebraska State Medical Association recommends that a voluntary testing program be implemented immediately in each community, either on a local basis or in conjunction with a Regional Planning Program; and

BE IT FURTHER RESOLVED, that the Nebraska State Medical Association through its Committee on Maternal and Child Health disseminate this information to the public in an educational program to acquaint them with the importance of this testing program; and

BE IT FURTHER RESOLVED, that a copy of this resolution be forwarded to the Nebraska



Hospital Association, Director of the Department of Public Health and all interested allied health organizations.

It was moved by Dr. Nye that this report and resolution be accepted. This was seconded by Dr. McNeill and the motion carried.

The Board of Councilors adjourned for lunch, at which time Governor Frank Morrison spoke to this group. The meeting reconvened at 2:00 p.m.

Dr. Nye, Chairman of the Planning Committee, discussed the proposals which had been referred to the committee by the House of Delegates at the 1964 Annual Session. Dr. Nye then asked Dr. Garlinghouse to present information on the permanent headquarters office building. Proposed floor plans, photos and other visual aids were presented to the Councilors.

Following discussion, Dr. McNeill moved that the report of the Planning Committee be accepted in its entirety. The motion was seconded by Dr. Raines and carried.

Dr. Landgraf, Chairman of the Psychiatry Committee, discussed the report of his committee. He also informed the Councilors that the committee was working on an exhibit for the Annual Session. Dr. Lee moved that this report be accepted. This was seconded and carried.

Dr. Lee, Chairman of the Public Relations Committee, discussed the "9th Annual Insurance Report" which has not been mailed due to objections which were received. He also called attention to the Code of Cooperation between the Medical and Hospital Associations and the news media. It was moved and seconded that this report and the Code of Cooperation be accepted. The motion carried.

The following reports were accepted as they appeared in the 1964 Audit and Committee Reports: Audit, Board of Trustees, Delegate to the American Medical Association, Delegate to the North Central Medical Conference, Editor, Executive Secretary, Conference on Cardiovascular Disease, Conference on Health Education Goals, Allied Professions Committee, Blood and Blood Products, Civil Defense and Disaster, Diabetes, Health Education in Schools and Colleges, Insurance, Joint Committee for the Improvement of the Care of the Patient, Policy, Prepayment Medical Care, Public Health, Relative Value Study, Rural Medical Service and Traffic Safety.

The Board of Councilors also approved the two reports which were handed to them prior to the meeting — the reports on the Medical Education Committee and the report on the special call of the House of Delegates of the AMA.

Mr. Neff presented the following resolution which was received in the headquarters office:

The Scotts Bluff County Medical Society, at its regular meeting on January 12, 1965, voted to have our delegate, Dr. Ed Loeffel, present the following resolution to the House of Delegates:

WHEREAS, the present conversion factors in use for Welfare payments have not been revised since their inception;

WHEREAS, the conversion factors are not in keeping with present economic standards; and

WHEREAS, the same conversion factors are

now in effect for the Kerr-Mills Program and most probably will be utilized for any future governmental health program.

BE IT THEREFORE RESOLVED, that the conversion factors be renegotiated immediately with the absolute minimum conversion factors being those now employed for other governmental agencies.

BE IT FURTHER RESOLVED, that no agreement concerning fee schedules can be negotiated or approved by an individual or group representing the State Medical Association, as such, without the express approval of the House of Delegates.

Following considerable discussion, it was moved by Dr. McGreer that this resolution not be accepted, and that the Scotts Bluff County Medical Society be informed of the mechanics being used relative to conversion factors. This was seconded by Dr. Salter, and carried.

Mr. Neff stated that he had a couple of items he would like to present to the Councilors and the House of Delegates for their consideration. He suggested that the Board of Councilors might meet on Friday rather than Sunday for their mid-winter meeting. The House of Delegates could meet on Saturday and Sunday immediately following, and in this way it would not necessitate two trips to meetings for the officers and other members who attend both the Board of Councilors and House of Delegates meeting.

Mr. Neff also asked them to consider dropping the word, "State" from the name of the Association, making it Nebraska Medical Association. He stated that several of the states have done this, and that there is some confusion and some people think the Association is connected with state government.

The following applications for Life Membership were considered: Drs. L. J. DeBacker, Hastings; J. Calvin Davis, Omaha; A. Greenberg, Omaha; J. S. McAvin, Omaha; J. J. O'Hearn, Omaha; Elizabeth M. Swab, Omaha; S. D. Cowan, Sr., Falls City; and J. G. Gillispie, Falls City. The name of Dr. W. I. Devers, Pierce, was also considered, although there was no official letter of recommendation from his local county society.

Following discussion regarding the eligibility of Dr. J. J. O'Hearn of Omaha, it was moved by Dr. Ashby to accept these applications for Life Membership providing the dues situation of Dr. O'Hearn was brought up to date and also pending the receipt of the official letter for Life Membership of Dr. Devers. The motion was seconded and carried.

The following 50-year practitioners were approved: Drs. Chas. Pinkerton, Beatrice; R. C. McNamara, Crofton; Charlotte Seiver, Fremont; Frank D. Ryder, Grand Island; O. D. Johnson, Kearney; W. C. Becker, Lincoln; Paul Black, Lincoln; A. D. Munger, Bullhead City, Arizona; J. M. Woodward, Lincoln; A. C. Barry, Norfolk; R. F. Farrell, San Francisco, Calif.; A. Greenberg, Omaha; J. Jay Keegan, Omaha; James Kelly, Sr., Omaha; Ralph Luikart, Omaha; J. Harry Murphy, Omaha; A. F. Srb, Omaha; and Elizabeth Swab, Omaha.

There being no further business, the Board of Councilors was adjourned.

# PROCEEDINGS HOUSE OF DELEGATES Nebraska State Medical Association

February 27, 1965

The first session of the Mid-Winter Meeting of the House of Delegates was held Saturday, February 27, 1965, at the Fort Kearney Hotel, Kearney, Nebraska.

The meeting was called to order by the Speaker of the House, Dr. Wm. Nutzman.

A report of the Credentials Committee showed that 51 delegates were present, and the meeting was declared in session.

Dr. Nutzman reminded the delegates that the sessions of the House were now being tape recorded, and that they should speak into the microphone stating their name, county and question of motion.

A letter was presented from the President of the Omaha-Douglas County Medical Society stating that three of their duly elected delegates and their alternates would be unable to attend this Mid-Winter Meeting, and requesting that Drs. E. L. MacQuiddy, W. E. Kelley and A. W. Abts, who are duly elected alternates, be seated in place of those unable to attend. It was moved by Dr. Loeffel that these alternates be seated. The motion was seconded by Dr. Claussen, and carried.

The Speaker called for approval of the Annual Session minutes as published in the July, 1964 Journal. Dr. McWhorter moved that these be accepted as printed. The motion was seconded by Dr. Nuss, and carried.

Dr. Schenken was asked to present an oral report on the Special Call of the House of Delegates of the American Medical Association. This report was referred to Reference Committee No. 1.

Mr. Frank Woolley, Field Representative of the American Medical Association, was asked to speak to the House of Delegates. Mr. Woolley compared the provisions of the Medicare Bill of the Administration and the Eldercare Bill. He stated that the major problem was that the majority of people were uninformed, and we can win if we inform the uninformed. He urged that Physicians inform their patients.

Mr. Neff reviewed the current legislation which concerned medicine. He stated that the Association was fortunate in having a physician in the Legislature, and he introduced Dr. S. H. Brauer, State Senator from Norfolk, to the House of Delegates.

Dr. Garlinghouse was asked to report to the House of Delegates on the proposal of a permanent headquarters office building. Dr. Garlinghouse urged the delegates to read the report and recommendations of the Planning Committee very carefully. Figures on the size, cost and methods of financing such a building were presented.

The minutes of the Mid-Winter Meeting of the Board of Councilors were read by Dr. McFadden, Vice Speaker.

Following a short recess, the Speaker again called the meeting to order.

The Reference Committee assignments were read, and the Speaker called for approval from the House. Dr. Miller moved that these assignments be approved. This was seconded and carried.

The Reference Committee work assignments were then read.

Resolutions from the floor were called for, and the following were presented:

**Resolution No. 1** — Presented by Dr. McMurtrey, Omaha-Douglas County Medical Society:

WHEREAS, at the 1963 session of the Unicameral of the State of Nebraska, the Kerr-Mills program was endorsed by appropriate enabling legislation, and

WHEREAS, this program has not accomplished the purpose for which it was designed in the State of Nebraska, and

WHEREAS, the official position of the House of Delegates has always been in support of programs for the medically needy;

THEREFORE, BE IT RESOLVED, that the House of Delegates of the Nebraska State Medical Association go on record as supporting corrective legislation in the current session of the Unicameral of the State of Nebraska, and

FURTHER BE IT RESOLVED, that properly informed representatives of the Nebraska State Medical Association be instructed to attend all hearings before the appropriate committees of the Unicameral in order to make known our official position and lend support for legislative changes which are indicated in order to properly implement the objective and purposes of the Kerr-Mills program.

This resolution was referred to Reference Committee No. 1.

**Resolution No. 2** — Presented by Dr. McMurtrey, Omaha-Douglas County Medical Society:

WHEREAS, there is now in the planning stage a suggested program of regional medical libraries throughout the United States, and

WHEREAS, the University of Nebraska College of Medicine Library is an excellent medical library which has offered excellent library service on a regional basis to those requesting it;

THEREFORE, BE IT RESOLVED that the House of Delegates of the Nebraska State Medical Association go on record in favor of the development of such a regional medical library at the University of Nebraska College of Medicine, and

FURTHER BE IT RESOLVED, that the appropriate officials of the Nebraska State Medical Association be instructed to implement this resolution by all appropriate means at their disposal.

This resolution was referred to Reference Committee No. 6.

**Resolution No. 3** — Presented by Dr. Sievers, Washington County Medical Society:

Preparation of hospitals for accreditation visit and maintenance of accreditation.



WHEREAS, one of the objectives of our Association is to raise the standard of care throughout the State of Nebraska, and

WHEREAS, it is generally recognized that an important means of elevating this standard of care is by accreditation through the Joint Commission on Accreditation of Hospitals, and

WHEREAS, many hospitals in our state are not accredited because of lack of knowledge of eligibility requirements and other hospitals need only a mild stimulus to interest them in this goal, and

WHEREAS, a highly successful means has been developed in another state (Kentucky) to encourage accreditation by the joint efforts of the State Hospital Association and the State Medical Association; now, therefore,

IT IS HEREBY RESOLVED, that the Nebraska State Medical Association through joint efforts with the Nebraska Hospital Association develop and establish a manual and methods for aiding our hospitals to meet and maintain the accreditation requirements of the JACH.

This resolution was referred to Reference Committee No. 3.

Mr. Neff read a letter which was received from the Nebraska Funeral Directors Association, Inc., expressing concern over recent articles in "Medical Economics" which generally tended to down-grade the profession and dignity of death. This organization asked our Association to register a complaint against such unwarranted attacks against their profession. This letter was referred to Reference Committee No. 6.

Dr. Nutzman stated that a survey of the delegates had been made relative to holding the first session of the House of Delegates at the Annual Session on Monday morning, rather than on Tuesday morning. This would give the Reference Committees all day Tuesday to consider matters referred to their committee, and the House would reconvene at 9:00 on Wednesday morning.

Dr. Nutzman stated that the poll of the delegates showed 51 in favor of opening the House on Monday; 8 against; 1 no opinion; and no response from 4.

Dr. Weekes moved that the House convene at 1:00 p.m. rather than at 9:00 a.m. on Monday. There was no second to this motion, and the motion was lost.

Dr. Landgraf moved that the polled vote of the delegates be accepted as an official action of the House of Delegates. This motion was seconded and carried.

Dr. Landgraf was granted permission of the floor and asked if the Policy Committee had considered the resolution of the Adams County Medical Society submitted in 1963 regarding the equitable representation of constituents in their governing bodies. Dr. Garlinghouse, Chairman of the Policy Committee, stated that this had not been considered, but that a meeting of this committee has been scheduled and this resolution would be considered at that time.

Mr. Neff asked for recommendations from the House of Delegates on two bills: LB 532, regarding admissions and dismissals of mental patients, which has been introduced into the Legislature; and the second bill regarding foreign physicians practicing in state medical institutions, which has not as yet been introduced. These two bills were referred to Reference Committee No. 7.

There being no further business, the House was adjourned to reconvene at 9:00 a.m., Sunday, February 28, 1965.

## HOUSE OF DELEGATES

February 28, 1965

The second session of the Mid-Winter Meeting of the House of Delegates was called to order by Dr. McFadden, Vice Speaker of the House, on Sunday, February 28, 1965.

A report of the Credentials Committee showed that 48 delegates were present. Inasmuch as 20 members constitute a quorum, the House was declared in session.

The minutes of the first session were read and approved.

Dr. Cecil Wittson, Dean of the University of Nebraska College of Medicine, was asked to present an oral report. He discussed the need for general practitioners and said that the University was encouraging students to go into general practice. Dr. Wittson presented the proposed building program for the University to the House of Delegates.

The reports of the Reference Committees were called for, and they were presented as follows:

Reference Committee No. 1 — Dr. H. V. Smith, Chairman, presented the following report:

Other members of this committee were Drs. McMurtrey, Frazer, Glenn and Elias.

This Reference Committee has read, appraised and approved the report of the Board of Trustees, and I so move.

This motion was seconded and carried.

The report of the Delegate to the Interim Session of the AMA was read, appraised and approved. It was the feeling of this committee that no action need be taken on the recommendations made. We recognize that this is Dr. McCarthy's final report as Delegate, and we recommend that he receive high commendation for his long and efficient service as our delegate to the AMA, and that the Executive Secretary be instructed to send him a letter expressing the high regard in which he is held and our sincere thanks for his great contribution to our society. This letter to be signed by the President of the Association. I so move.

This motion was seconded and carried.

This committee has read, appraised and approved the report of the Editor of the Nebraska State Medical Journal. I so move.

The motion was seconded and carried.

This committee has read, appraised and approved the report of the Executive Secretary, with special commendation for his industry and excellent organization. I so move.



The motion was seconded and carried.

The report of the Delegate to the North Central Conference was read, appraised and approved. The committee feels that congratulations are in order for Dr. Maxwell's election as president of this group, and that this recognition of his excellent qualifications brings credit to the state organization. I so move.

The motion was seconded and carried.

The resolution submitted by the Omaha-Douglas County Medical Society calling for legislative changes in the Kerr-Mills bill was approved. Also covering the same subject and specifying changes that will improve the operation of this legislation, were the 10 points submitted by Dr. Garlinghouse. The essence and sense of these changes was approved. It was felt that especially important was the removal of the administration of this program from the Department of Welfare to some other agency. I so move.

The motion was seconded and carried.

The report of the Delegate to the Special Session of the AMA was read, appraised and approved. Arising from the consideration of this report is the following resolution concerning Eldercare which is an integral part of this report:

WHEREAS, at the recent special session of the House of Delegates of the American Medical Association, the basic principles of the AMA "Eldercare" program were outlined; and

WHEREAS, the disadvantages and shortcomings of the "King-Anderson" legislation were carefully documented.

THEREFORE, BE IT RESOLVED, that the House of Delegates of the Nebraska State Medical Association go on record as being in wholehearted support of HR 3727 — the Herlong-Curtis Eldercare Bill, and

FURTHER BE IT RESOLVED, that the House of Delegates continue its opposition to the King-Anderson Bill (HR 1 and S 1) and all similar legislation, and

FURTHER BE IT RESOLVED, that the Executive Secretary be empowered to use all means at his disposal to combat King-Anderson legislation and in support of HR 3727, including copy to local societies for news releases or advertisements, which may be signed by the members of the local Medical Society; utilization of the Illinois questionnaire at the local level, etc.; and

FURTHER BE IT RESOLVED, that a copy of this resolution be immediately forwarded to the Executive Offices of the American Medical Association.

The Speaker called for approval of this resolution, and the motion was made and seconded to adopt this resolution. Motion carried.

I move that the report of this Reference Committee No. 1 as a whole be adopted. This motion was seconded and carried.

Reference Committee No. 2 — Dr. Warren Bosley, Chairman, presented the following report:

Other members of this committee were Drs. Walker and Wendt.

In reading the minutes of the Board of Councilors, this committee would like to suggest that the report of the Council on Professional Ethics be made available to the members through the "Pink Sheet" or some such means.

The motion was made and seconded to adopt these minutes, and the motion carried.

The report of the Audit was considered and approved. I so move.

The motion was seconded and carried.

The report of the Allied Professions Committee was considered and approved. I so move. This was seconded and carried.

The report of the Health Education Committee was considered and approved. I so move.

The motion was seconded and carried.

The report of the Sub-Committee on Athletic Injuries, along with the Guidelines for Physicians on the Pre-season Medical Evaluation for High School Athletes, and the Medical Record form, were considered by this committee. We feel this committee should be commended of their excellent work. This committee feels that item "K. Lack of full extension of elbow in basketball player," under VII. Musculoskeletal System in the Guidelines, should not be considered as a disqualifying condition and should be deleted from this Guide. This committee recommends approval of this report, the medical form and the Guide, with the deletion mentioned. I so move.

This was seconded and carried.

The report on the 2nd National Conference on Cardiovascular Disease was studied by this committee, and we feel that Dr. Booth should be commended for submitting this report. However, there was some question regarding some of the recommendations from the Conference. We recommend adoption of this report but not necessarily all the recommendations of the Conference. I so move.

This was seconded and carried.

The report on the 1st National Conference on Health Education Goals was considered. This committee recommends adoption of this report along with the recommendations in this report. I so move.

This was seconded and carried.

The report of the Medical Education Committee was considered and approved, and I move that this report be adopted.

This was seconded and carried.

I move that the report of Reference Committee No. 2 be accepted as a whole.

The motion was seconded and carried.

Reference Committee No. 3 — Dr. Houtz Steenburg, Chairman, submitted the following:

Other members of this committee were Drs. Claussen and Burns.

This committee reviewed the report of the Civil Defense and Disaster Committee and move for the approval of this report.

This was seconded and carried.

This committee reviewed the report of the Joint Committee for Improvement of the Care of the Patient, and move for its acceptance.

This was seconded and carried.

We have reviewed the Life Memberships and move that these men be so honored.

This was seconded and carried.

We have reviewed the list of 50-year practitioners and move for their approval.

This was seconded and carried.

We have reviewed the resolution from the Washington County Medical Society pertaining to preparation of hospitals for accreditation visits and maintenance of accreditation. We approve this resolution and suggest it be referred to the Planning Committee for study and implementation.

This was seconded and carried.

We move that the report of Reference Committee No. 3 as a whole be accepted.

The motion was seconded and carried.

**Reference Committee No. 4 — Dr. Dwaine Peetz, Chairman, submitted the following:**

Other members of this committee were Drs. Gogela and Burney.

We have studied the report of the Insurance Committee and recommend its approval.

This was seconded and carried.

We have studied the report of the Prepayment Medical Care Committee and recommend its approval.

This was seconded and carried.

We have studied the report of the Public Relations Committee. We feel that the 9th Annual Insurance Report should not be mailed out by the Nebraska State Medical Association. We approve the report of this committee and move that it be accepted.

This was seconded and carried.

We have studied the Code of Cooperation. We submit the following additional recommendation to be included under Nebraska State Medical Association:

Sessions of the House of Delegates of the Nebraska State Medical Association shall be open to the news media until such time as the Association shall designate otherwise, or when the House is in executive session. All news media representatives attending a session shall attend the news conference which follows immediately each session of the House of Delegates at which representatives of the Association will be present to explain procedures and actions taken. The President, President-Elect, Secretary-Treasurer, Speaker of the House of

Delegates, Executive Secretary and possibly other Association representatives will be present at the press conference.

The news media representatives will not be permitted to attend sessions of Reference Committees of the House of Delegates.

With this addition, we move that this Code of Cooperation be adopted, and recommend that copies be sent to each member of the Nebraska State Medical Association, each hospital, the Nebraska Broadcasters Association and the Nebraska Press Association.

This motion was seconded and carried.

We move the report of Reference Committee No. 4 be adopted as a whole.

This was seconded and carried.

**Reference Committee No. 5 — Dr. R. F. Sievers, Chairman, submitted the following:**

Other members of this committee were Drs. Lempka, Maxwell, Harry and Doering.

This committee has reviewed the report of the Rural Medical Service Committee and recommend that it be accepted. It appears that the Annual Senior Medical Day is a highly successful venture. The proposed suggestion that an invitation be extended to have the National Rural Health Council meet in Nebraska was favorably received. It is suggested that this offer be extended to this Council of the AMA in the near future by the officers of our Association. Our committee felt that the logical location for such a meeting would be the Continuing Education Center in Lincoln.

I move that this part of our report be accepted.

This was seconded and carried.

The report of the Policy Committee was reviewed. Our committee was in accordance that the PKU testing should be considered by the Maternal and Child Health Committee. The remainder of the report was informational only. We move that the report of the Policy Committee be accepted. This was seconded and carried.

This was seconded and carried.

The greater part of this committee's effort was devoted to the report of the Planning Committee. The less controversial subjects will be dealt with first.

The Planning Committee recommended that the proposed Emergency Care Unit at the Legislature would provide emergency service on a call basis for members of the Legislature. The Lancaster County Medical Society has set up a call list from members of their organization and are providing this emergency service rather than having a physician in attendance at each day of the Legislative session. Our Reference Committee recommends that this be continued on an emergency call basis using a call list from the local county medical society.

The second item was in regard to the Annual Conference of State and County Medical Society Officers. In view of the tremendous suc-



cess of this first meeting last fall, it is recommended that a similar Conference be held in 1965.

I move that these two recommendations be accepted.

This was seconded and carried.

The third item referred to in this report was the "Circuit Rider Courses." A survey of our membership suggests an interest in the re-establishment of some type of Postgraduate Course such as the "Circuit Rider Course." The Planning Committee recommended that this be done, and this Reference Committee concurs in this recommendation. Our committee also was of the opinion that the Committee on Education should be made responsible for this post-graduate program and work jointly with our medical schools regarding its implementation.

I move that this recommendation be accepted.

The motion was seconded and carried.

The last item concerns the Planning Committee's report and recommendations with respect to a permanent headquarters building. After considerable deliberation, our Reference Committee supports the recommendations of the Planning Committee. It is our opinion that a permanent headquarters building is both necessary and is feasible. There is great need to expand our office space and it cannot be done at our present location. Therefore, the following recommendations of the Planning Committee are supported:

1. That a permanent headquarters office building be built and that the ground at 62nd and Cotner Blvd., Lincoln, be purchased for this purpose.
2. That the House of Delegates create a permanent Building Committee of five members to be appointed by the Speaker of the House, this latter requested by Dr. Garlinghouse.
3. That this Committee shall have the authority to:
  - a. Develop plans for such a building.
  - b. Develop methods of financing.
  - c. Shall make a progress report to the Annual Session in April of 1965.

I move that this part of the report be adopted.

This was seconded and carried.

I move that our Reference Committee report be adopted in its entirety.

The motion was seconded and carried.

**Reference Committee No. 6** — Dr. Richard Egan, Chairman, submitted the following:

Other members of this committee were Drs. Loeffel and McConahay.

This committee considered the report of the Blood and Blood Products Committee and recommends that the House of Delegates authorize the Blood and Blood Products Committee to study blood procurement, blood processing, and

compatibility testing in the State of Nebraska. This committee further recommends passage by the House of the resolution pertaining to a Congressional bill to define the rights of non-profit blood banks.

We recommend acceptance of the entire report of this committee and I so move.

This was seconded and carried.

This committee considered the reports of the Diabetes Committee, the Public Health Committee and the Traffic Safety Committee, and recommend that these reports be accepted. I so move.

This was seconded and carried.

This committee considered the resolution of the Omaha-Douglas County Medical Society relative to the location of a regional medical library at the University of Nebraska College of Medicine. We recommend approval of this resolution and I so move.

This was seconded and carried.

This committee considered the letter sent by the President and Executive Secretary of the Nebraska Funeral Directors Association, Inc., and recommends that the House of Delegates acknowledge receipt of this letter. I so move.

This was seconded and carried.

I move that the report of Reference Committee No. 6 as a whole be approved.

This motion was seconded and carried.

**Reference Committee No. 7** — Dr. Chas. Landgraf, Chairman, submitted the following:

Other members of this committee were Drs. McWhorter and Andersen.

This committee considered the resolution from the Scotts Bluff County Medical Society relative to conversion factors for the Relative Value Study. After much discussion, it was clear that no action by the Relative Value Study Committee can be taken without approval of the House; that it is possible to renegotiate the fee schedule; that the Relative Value Study Committee now is considering recommendations for revision of the schedule; and that these deliberations will be presented to the House at the Annual Session in April, 1965, for further consideration and action by the House. It was further apparent that the recommendations generally will be for an increase in fees.

In view of the foregoing, Dr. Loeffel, who appeared in the Reference Committee, indicated he was confident the matter was being handled in a manner satisfactory to his county medical society and, therefore, he would move to withdraw this resolution on the basis of there being no necessity for it.

I move that this portion of the committee report be approved.

This was seconded and carried.

This committee considered the report of the Maternal and Child Health Committee. This report was approved with the following modification:



"In regard to making available to the membership of the Nebraska State Medical Association the booklet, "Nebraska Directory of Services for Children and Youth," published by the Nebraska Committee for Children and Youth, the Maternal and Child Health Committee should study the matter and make recommendations to the House at the Annual Session, April, 1965."

I move that this report be approved.

This was seconded and carried.

This committee considered the resolution of the Maternal and Child Health Committee relative to PKU testing, and recommended approval. I so move.

This was seconded and carried.

This committee considered the report of the Committee on Medicine and Religion, and recommend its approval. I so move.

This was seconded and carried.

This committee considered the report of the Psychiatry Committee and recommends its approval. I so move.

This was seconded and carried.

The committee considered the report of the Relative Value Study Committee and recommends its approval. I so move.

This was seconded and carried.

The committee was asked to consider LB 532 relative to admissions and dismissals of mental patients. There was unanimous agreement that this bill should be opposed by the Nebraska State Medical Association for the following reasons:

1. The bill is ambiguous.
2. It placed private hospitals under authority of Department of Institutions with respect to type of medical care.
3. It requires medical decisions by nonmedical personnel.

It was agreed that there may exist a need for revision of certain statutes pertaining to the mentally ill. The committee recommends that the Nebraska State Medical Association oppose this bill and that it be suggested to the Public Health Committee of the Nebraska Legislature that the Legislative Council might undertake a study of the statutes pertaining to the mentally ill with a view toward possible revisions.

I move that this portion of the report be adopted.

This motion was seconded and carried.

This committee was also asked to consider another Legislative Bill relative to foreign physicians practicing in state medical institutions. The committee recommends that the Nebraska State Medical Association opposes this bill for the following reasons:

1. It sets a double standard for the quality of medical care in Nebraska.
2. It approves a circumstance in which patients in a state medical institution would

receive medical care of a standard lower than that required for patients in other hospitals.

3. It would create a situation in which it would be impossible to recruit good quality medical staff for state hospitals.
4. It is ambiguous.
5. Statutes already exist concerning opportunities for employing properly qualified graduates of foreign medical schools in state hospitals.

I move that this portion of the committee report be accepted.

This was seconded and carried.

I move that the report of Reference Committee No. 7 as a whole be accepted.

The motion was seconded and carried.

Dr. Nutzman said he would like to refer back to the report of Reference Committee No. 5 relative to the permanent headquarters building. He asked for clarification of the recommendations on the building and the purchasing of the ground.

Following discussion, Dr. Landgraf moved that Reference Committee No. 5 report relative to the permanent building for the State Association be reconsidered by the House. This motion was seconded and carried.

After further discussion, the following motion was made by Dr. Landgraf: That the President of the NSMA appoint a Building Committee to concern itself with purchasing land in Lincoln, Nebraska, for the purpose of constructing the building; that the House of Delegates indicate endorsement of purchasing ground and construction of the building; that the Building Committee further investigate the matter and report to the House of Delegates at the Annual Session in April, including the cost of construction, cost of maintenance, and recommendations for financing the project. The motion was seconded by Dr. McWhorter and carried.

Dr. Nutzman asked for the approval of the House to appoint Dr. Garlinghouse, President, as Chairman of this Building Committee. It was moved and seconded to approve this appointment, and the motion carried.

Dr. Nutzman informed the House of Delegates that Mrs. Lucian Stark had passed away, and asked that this be recorded in the minutes. He also stated that the family of Dr. D. B. Steenburg and Dr. J. R. Schenken should be contacted in an expression of sympathy. The motion to this effect was made, seconded and carried.

Dr. Otis Miller was granted permission of the floor and moved that the House of Delegates go on record as approving the building plans and other projects of the University of Nebraska College of Medicine, and that the Association support any action in the Legislature this year. This was seconded and carried.

There being no further business, the House of Delegates was adjourned.

# Roster, House of Delegates

FEBRUARY 27 and 28, 1965

|                                          | Febr.<br>27 | Febr.<br>28 |
|------------------------------------------|-------------|-------------|
| ADAMS—                                   |             |             |
| Chas. Landgraf, Jr., Hastings (D) -----  | P           | P           |
| Loyd Wagner, Hastings (A) -----          |             |             |
| ANTELOPE—                                |             |             |
| Dwaine Peetz, Neligh (D) -----           | P           | P           |
| Frank McClanahan, Neligh (A) -----       |             |             |
| BOONE—                                   |             |             |
| Roy J. Smith, Albion (D) -----           | P           | P           |
| Gerald Spethman, Albion (A) -----        |             |             |
| BOX BUTTE—                               |             |             |
| W. L. Howell, Hyannis (D) -----          |             |             |
| J. J. Ruffing, Hemingford (A) -----      |             |             |
| BUFFALO—                                 |             |             |
| H. V. Smith, Kearney (D) -----           | P           | P           |
| F. L. Richards, Kearney (A) -----        |             |             |
| BURT—                                    |             |             |
| I. Lukens, Tekamah (D) -----             | P           | P           |
| L. Morrow, Tekamah (A) -----             |             |             |
| BUTLER—                                  |             |             |
| L. R. Rudolph, David City (D) -----      |             |             |
| W. C. Niehaus, David City (A) -----      |             |             |
| CASS—                                    |             |             |
| R. R. Andersen, Nehawka (D) -----        | P           | P           |
| R. Brendel, Plattsmouth (A) -----        |             |             |
| CHEYENNE-KIMBALL-DEUEL—                  |             |             |
| C. B. Dorwart, Sidney (D) -----          | P           | P           |
| S. R. Rathbun, Sidney (A) -----          |             |             |
| CLAY—                                    |             |             |
| H. V. Nuss, Sutton (D) -----             | P           | P           |
| COLFAX—                                  |             |             |
| H. Dev Myers, Schuyler (D) -----         |             |             |
| John R. O'Neal, Clarkson (A) -----       |             |             |
| CUMING—                                  |             |             |
| L. J. Chadek, West Point (D) -----       |             |             |
| R. H. Scherer, West Point (A) -----      |             |             |
| CUSTER—                                  |             |             |
| Ther. Koefoot, Jr., Broken Bow (D) ----- |             |             |
| Ralph Blair, Broken Bow (A) -----        |             |             |
| DAWSON—                                  |             |             |
| P. Bryant Olsson, Lexington (D) -----    | P           | P           |
| V. D. Norall, Lexington (A) -----        |             |             |
| DODGE—                                   |             |             |
| Robert Sorensen, Fremont (D) -----       | P           | P           |
| J. L. Dyer, North Bend (A) -----         |             |             |
| FILLMORE—                                |             |             |
| V. S. Lynn, Geneva (D) -----             | P           | P           |
| A. A. Ashby, Geneva (A) -----            |             |             |
| FIVE COUNTY—                             |             |             |
| C. M. Coe, Wakefield (D) -----           | P           | P           |
| Wm. Reynolds, So. Sioux City (A) -----   |             |             |
| R. P. Carroll, Laurel (D) -----          |             |             |
| Hy Billerbeck, Randolph (A) -----        |             |             |
| John T. Keown, Pender (D) -----          | P           | P           |
| George John, Wayne (A) -----             |             |             |
| FOUR COUNTY—                             |             |             |
| Roy Cram, Burwell (D) -----              |             |             |
| Otis Miller, Ord (A) -----               | P           | P           |
| FRANKLIN—                                |             |             |
| W. A. Doering, Franklin (D) -----        | P           | P           |
| C. J. Thomas, Franklin (A) -----         |             |             |
| GAGE—                                    |             |             |
| H. F. Elias, Beatrice (D) -----          | P           | P           |
| J. D. Chapp, Beatrice (A) -----          |             |             |
| GARDEN-KEITH-PERKINS—                    |             |             |
| A. B. Albee, Oshkosh (D) -----           | P           | P           |
| R. C. Chase, Ogallala (A) -----          |             |             |
| HALL—                                    |             |             |
| Warren Bosley, Grand Island (D) -----    | P           | P           |
| P. T. Sloss, Grand Island (A) -----      |             |             |
| HAMILTON—                                |             |             |
| H. G. Steenburg, Aurora (D) -----        | P           | P           |
| J. M. Woodard, Aurora (A) -----          |             |             |
| HARLAN—                                  |             |             |
| K. C. McGrew, Orleans (D) -----          |             |             |
| H. R. Walker, Alma (A) -----             | P           | P           |
| HOLT and NORTHWEST—                      |             |             |
| James E. Ramsey, Atkinson (D) -----      | P           | P           |
| HOWARD—                                  |             |             |
| M. D. Mathews, St. Paul (D) -----        |             |             |
| R. W. Hanisch, St. Paul (A) -----        |             |             |
| JEFFERSON—                               |             |             |
| K. J. Kenney, Fairbury (D) -----         |             |             |
| Frank Falloon, Fairbury (A) -----        |             |             |
| JOHNSON—                                 |             |             |
| John C. Schutz, Tecumseh (D) -----       |             |             |
| M. F. Sorrell, Tecumseh (A) -----        |             |             |

|                                           |   |   |
|-------------------------------------------|---|---|
| KNOX—                                     |   |   |
| R. L. Tollefson, Wausa (D) -----          | P | P |
| Stanley Neil, Niobrara (A) -----          |   |   |
| LANCASTER—                                |   |   |
| Bernard Wendt, Lincoln (D) -----          | P | P |
| Paul Goetowski, Lincoln (A) -----         |   |   |
| Donald Purvis, Lincoln (D) -----          | P | P |
| Roy Statton, Lincoln (A) -----            |   |   |
| Paul Maxwell, Lincoln (D) -----           | P | P |
| Frank Tanner, Lincoln (A) -----           |   |   |
| Maurice D. Frazer, Lincoln (D) -----      | P | P |
| A. L. Smith, Jr., Lincoln (A) -----       |   |   |
| L. J. Gogela, Lincoln (D) -----           | P | P |
| Donald Matthews, Lincoln (A) -----        |   |   |
| LINCOLN—                                  |   |   |
| Bruce F. Claussen, North Platte (D) ----- | P | P |
| G. E. Sawyers, North Platte (A) -----     | P | P |
| MADISON—                                  |   |   |
| J. H. Dunlap, Norfolk (D) -----           | P | P |
| J. D. Pollack, Norfolk (A) -----          |   |   |
| MERRICK—                                  |   |   |
| NEMAHA—                                   |   |   |
| J. J. Bence, Auburn (D) -----             | P | P |
| P. M. Scott, Auburn (A) -----             |   |   |
| NORTHWEST NEBRASKA—                       |   |   |
| A. J. Alderman, Chadron (D) -----         | P | P |
| L. H. Hoevet, Chadron (A) -----           |   |   |
| NUCKOLLS—                                 |   |   |
| Claude T. Mason, Superior (D) -----       |   |   |
| Robert Howe, Nelson (A) -----             |   |   |
| OMAHA-DOUGLAS—                            |   |   |
| G. B. McMurtrey, Omaha (D) -----          | P | P |
| G. C. Schreiner, Omaha (A) -----          |   |   |
| W. J. McMartin, Omaha (D) -----           | P | P |
| E. L. MacQuiddy, Jr., Omaha (A) -----     | P | P |
| W. F. Giles, Omaha (D) -----              |   |   |
| M. E. Stoner, Omaha (A) -----             |   |   |
| D. W. Burney, Jr., Omaha (D) -----        | P | P |
| J. A. Pleiss, Omaha (A) -----             |   |   |
| T. J. Gurnett, Omaha (D) -----            |   |   |
| J. J. O'Neill, Omaha (A) -----            |   |   |
| Arnold Lemпка, Omaha (D) -----            | P | P |
| J. J. Grier, Omaha (A) -----              |   |   |
| Richard Egan, Omaha (D) -----             | P | P |
| W. E. Kelley, Omaha (A) -----             | P | P |
| J. D. Coe, Omaha (D) -----                |   |   |
| J. X. Tamisiea, Omaha (A) -----           |   |   |
| T. T. Smith, Omaha (D) -----              |   |   |
| S. M. Truhlsen, Omaha (A) -----           |   |   |
| C. A. McWhorter, Omaha (D) -----          | P | P |
| A. W. Abts, Omaha (A) -----               | P | P |
| OTOE—                                     |   |   |
| T. L. Weekes, Nebraska City (D) -----     | P | P |
| W. C. Kenner, Nebraska City (A) -----     |   |   |
| PAWNEE—                                   |   |   |
| H. C. Stewart, Pawnee City (D) -----      |   |   |
| A. B. Anderson, Pawnee City (A) -----     |   |   |
| PHILIPS—                                  |   |   |
| H. A. McConahay, Holdrege (D) -----       | P | P |
| W. M. Reiner, Holdrege (A) -----          |   |   |
| PIERCE—                                   |   |   |
| PLATTE—                                   |   |   |
| Robert I. Burns, Columbus (D) -----       | P | P |
| Herbert Kuper, Columbus (A) -----         |   |   |
| POLK—                                     |   |   |
| Jim S. Carson, Osceola (D) -----          | P | P |
| H. S. Eklund, Osceola (A) -----           |   |   |
| RICHARDSON—                               |   |   |
| Wm. Farmer, Falls City (D) -----          |   |   |
| Wm. Glenn, Falls City (A) -----           | P | P |
| SALINE—                                   |   |   |
| L. W. Forney, Crete (D) -----             |   |   |
| Robert E. Quick, Crete (A) -----          | P | P |
| SAUNDERS—                                 |   |   |
| R. A. Youngman, Ceresco (D) -----         |   |   |
| I. M. French, Wahoo (A) -----             |   |   |
| SCOTTS BLUFF—                             |   |   |
| Edwin Loeffel, Mitchell (D) -----         | P | P |
| Carl Frank, Scottsbluff (A) -----         |   |   |
| SEWARD—                                   |   |   |
| W. Ray Hill, Seward (D) -----             | P | P |
| Robt. Herpolsheimer, Seward (A) -----     |   |   |
| SOUTHWEST NEBRASKA—                       |   |   |
| Fay Smith, Imperial (D) -----             |   |   |
| THAYER—                                   |   |   |
| L. G. Bunting, Hebron (D) -----           | P | P |
| R. E. Penry, Hebron (A) -----             |   |   |
| WASHINGTON—                               |   |   |
| R. F. Sievers, Blair (D) -----            | P | P |
| C. D. Howard, Blair (A) -----             |   |   |
| YORK—                                     |   |   |
| R. E. Harry, York (D) -----               | P | P |
| H. Friesen, Henderson (A) -----           |   |   |



# 1964 Annual Audit and Committee Reports Nebraska State Medical Association

January 19, 1965

Nebraska State Medical Association  
Lincoln, Nebraska

We have examined the books and records of the Nebraska State Medical Association for the year 1964, and submit herewith our report. Included in the report are the following exhibits and schedules:

Exhibit A — Analysis of Fund Balances

Exhibit B—Statement of Receipts and Disbursements—General Fund

Schedule B-1—Statement of Receipts and Disbursements—Annual Session

Schedule B-2—Comparison of General Expense with Budget

Schedule B-3—Statement of Receipts and Disbursements—Hall of Health

Exhibit C— Statement of Receipts and Disbursements—Journal Fund

Exhibit D — Statement of Investments

Schedule D-1—Statement of Investment Balances

Exhibit E — Journal Accounts Receivable—December 31, 1964

## EXHIBIT A

Exhibit A is the analysis of fund balances. During the year 1964 there was a decrease in the balances amounting to \$3,112.46. The total fund balance on December 31, 1964 was \$75,417.62, and was represented by cash in the general fund account of \$446.37, cash in the investment account of \$691.66, cash in the journal fund account of \$75.40, investments of \$71,204.19, and notes receivable from the Nebraska Medical Foundation of \$3,000.00. All of the above cash accounts are maintained at the National Bank of Commerce Trust and Savings Association, Lincoln, Nebraska.

## EXHIBIT B

The details of the changes in the general fund cash balances are shown in Exhibit B. In this statement the receipts and disbursements have been divided into two classifications. Under the heading of General, the principal items are membership dues of \$67,237.50, interest collected of \$696.90, trust account income of \$2,423.85, income from the annual session of \$6,533.35, and the American Medical Association membership expense rebate of \$537.97.

Other receipts include cash received for the American Medical Association dues of \$53,550.00. This amount was remitted to the American Medical Association, as shown under Other Disbursements in this statement. Also included as Other Receipts is an amount received in connection with the Athletic Conference of \$1,031.50, and a partial payment of \$2,000.00 on the note receivable from the Nebraska Medical Foundation.

The general disbursements of the Association are divided into the same classifications as the receipts.

The total amount of general disbursements was \$70,758.82. A comparison of these items with the budget items approved for 1964 is shown in Schedule B-2. Other disbursements were \$64,062.20. This amount included American Medical Association dues of \$53,550.00. Other items classified as Other Disbursements were \$2,914.15 for the purchase of new office equipment. Funds expended for the Athletic Conference amounted to \$716.92. Funds were advanced for Journal publication in the amount of \$3,058.75 in addition to the share of dues paid to the Journal publication as a part of the annual budget. Other disbursements from the General Fund amounted to \$3,822.38. The total General Fund disbursements during the year were \$134,821.02. The excess of disbursements over receipts for 1964 General Fund operations amounted to \$546.45.

## EXHIBIT C

On January 1, 1963, a separate journal fund account was established for handling of receipts and disbursements in connection with publication of the Association Journal. The details of the journal fund receipts and disbursements are presented as Exhibit C. Journal receipts during 1964 amounted to \$27,768.02, and total disbursements were \$28,503.98. The excess of disbursements over receipts for 1964 was \$735.96.

## EXHIBIT D

The changes that occurred in the Investment account during the year are shown in Exhibit D. The total of investments at the beginning of the year was \$71,034.24. There was a net increase in the U.S. Government Bonds, Series J, held by the Association of \$155.11. There was a net gain realized on the sale of U.S. Treasury Notes in the amount of \$14.84. The resulting net increase in investments for 1964 was \$169.95. The total amount of investments at cost value at December 31, 1964 was \$71,204.19. A detailed list of the investments at the beginning and close of the year is shown in Schedule D-1.

## EXHIBIT E

Exhibit E is a list of the Journal accounts receivable. Our examination of the accounts receivable records indicated that the major portion of these accounts are receivable for Journal advertising during the months of November and December, 1964. The records also indicated that these accounts are being paid currently. Because the Association operates on the cash basis, these items are not taken into income until cash is received. We did not confirm the balances of these accounts by independent correspondence.

## SCOPE OF EXAMINATION AND GENERAL COMMENTS

Receipts for the year were traced through the books and into the bank account. Tests were made of letters of transmittal tracing the detailed items to the individual members' account. An inspection of the members' cards in connection with our examination of the receipts indicated that all cards issued to members during the year were accounted for on the books of the Association. The records also indicate that during the year 1964 cards were issued to 104 life members, for which no dues were collected.



Cancelled checks for the year were inspected and compared to the items in the check register. Invoices and creditors' statements were examined covering a major portion of the disbursements. Minutes of the trustees' meetings during the year were examined in regard to authorization of salaries, budgets and other disbursements. The balances shown as cash in bank were confirmed by direct correspondence with the depository.

Our audit also included an inspection of securities owned by the Association at the close of the year. Funds in investment accounts were confirmed by correspondence. Subject to the foregoing comments, it is our opinion that the attached statements present fairly the financial position of the Nebraska State Medical Association at December 31, 1964, and the results of its operations for the year then ended on the basis of cash receipts and disbursements. Should any additional information be desired concerning matters which fall within the scope of our examination, we shall be pleased to supply it upon request.

# DANA F. COLE AND COMPANY

## EXHIBIT A:

### NEBRASKA STATE MEDICAL ASSOCIATION ANALYSIS OF FUND BALANCES YEAR 1964

|                                                                |             |
|----------------------------------------------------------------|-------------|
| Total Fund Balance, January 1, 1964                            | \$78,530.08 |
| Represented by:                                                |             |
| Cash—National Bank of Commerce, General Fund                   | \$ 1,380.89 |
| Cash—National Bank of Commerce, Trust Account, Investment Fund | 303.59      |
| Cash—National Bank of Commerce, Journal Fund                   | 811.36      |
| Investments—Exhibit D                                          | 71,034.24   |
| Notes Receivable—Nebraska Medical Foundation                   | 5,000.00    |
|                                                                | 78,530.08   |

|                                                                |           |
|----------------------------------------------------------------|-----------|
| Decrease in Fund Balances:                                     |           |
| Excess of Disbursements over Receipts—General Fund:            |           |
| Excess of Disbursements over Receipts                          | \$ 546.45 |
| Partial Payment on Note Receivable—Nebraska Medical Foundation | 2,000.00  |
|                                                                | 2,546.45  |
| Excess of Disbursements over Receipts—Journal Fund             | 735.96    |
|                                                                | 3,282.41  |
| Less Increase in Investments—Exhibit D                         | 169.95    |
|                                                                | 3,112.46  |

|                                                                |             |
|----------------------------------------------------------------|-------------|
| TOTAL FUND BALANCE, DECEMBER 31, 1964                          | \$75,417.62 |
| Represented by:                                                |             |
| Cash—National Bank of Commerce, General Fund                   | 446.37      |
| Cash—National Bank of Commerce, Trust Account, Investment Fund | 691.66      |
| Cash—National Bank of Commerce, Journal Fund                   | 75.40       |
| Investments—Exhibit D                                          | 71,204.19   |
| Notes Receivable—Nebraska Medical Foundation                   | 3,000.00    |
|                                                                | \$75,417.62 |

## EXHIBIT B:

### NEBRASKA STATE MEDICAL ASSOCIATION STATEMENT OF RECEIPTS AND DISBURSEMENTS GENERAL FUND YEAR 1964

|                                                                                      |             |
|--------------------------------------------------------------------------------------|-------------|
| Cash Balance, National Bank of Commerce, Lincoln, Nebr., Jan. 1, 1964                | \$ 1,380.89 |
| Cash Balance, National Bank of Commerce, Trust Account, Lincoln, Nebr., Jan. 1, 1964 | 303.59      |
|                                                                                      | \$1,684.48  |

## RECEIPTS:

|                           |             |
|---------------------------|-------------|
| General:                  |             |
| Membership Dues           | \$67,237.50 |
| Interest Collected        | 696.90      |
| Trust Account Income      | 2,423.85    |
| Annual Session—Sched. B-1 | 6,533.35    |

|                                                |           |
|------------------------------------------------|-----------|
| A.M.A. Membership Expense                      |           |
| Rebate                                         | 537.97    |
| Relative Value Studies                         | 263.50    |
|                                                | 77,693.07 |
| Other Receipts:                                |           |
| A.M.A. Dues                                    | 53,550.00 |
| Athletic Conference                            | 1,031.50  |
| Payment on Note by Nebraska Medical Foundation | 2,000.00  |
|                                                | 56,851.50 |

TOTAL RECEIPTS \$134,274.57

## DISBURSEMENTS:

|                                                       |             |
|-------------------------------------------------------|-------------|
| General:                                              |             |
| Salaries                                              | \$28,543.65 |
| Payroll Taxes                                         | 833.13      |
| Travel Expense                                        | 3,000.71    |
| Office Expense:                                       |             |
| Rent                                                  | 4,081.49    |
| Postage                                               | 1,737.85    |
| Telephone and Telegraph                               | 1,385.15    |
| Office Supplies, Mimeographing and Printing           | 1,091.49    |
| Annual Session                                        | 8,127.05    |
| Professional Fees                                     | 1,344.71    |
| Dues in Other Organizations                           | 640.00      |
| Insurance                                             | 91.11       |
| Printing and Publications                             | 1,763.72    |
| Officers' Expense                                     | 2,085.23    |
| A.M.A. Expense (Delegate, Alternate and Headquarters) | 2,113.54    |
| Committee Expense and Travel                          | 3,493.98    |
| Senior Medical Day                                    | 606.00      |
| Dues—Share to Journal                                 | 3,808.75    |
| Office Equipment and Furniture                        | 799.08      |
| General Fund Expense                                  | 625.45      |
| Public Information                                    | 4,586.73    |
|                                                       | 70,758.82   |
| Other Disbursements:                                  |             |
| A.M.A. Dues                                           | 53,550.00   |
| New Office Equipment                                  | 2,914.15    |
| Athletic Conference                                   | 716.92      |
| Journal Publication                                   | 3,058.75    |
| Other Disbursements from General Fund                 | 3,822.38    |
|                                                       | 64,062.20   |

TOTAL DISBURSEMENTS \$134,821.02

## EXCESS OF DISBURSEMENTS OVER

|                                                                                       |             |
|---------------------------------------------------------------------------------------|-------------|
| RECEIPTS                                                                              | 546.45      |
| Cash Balance, December 31, 1964                                                       | \$ 1,132.03 |
| REPRESENTED BY:                                                                       |             |
| Cash Balance, National Bank of Commerce, Lincoln, Nebr., Dec. 31, 1964                | 446.37      |
| Cash Balance, National Bank of Commerce, Trust Account, Lincoln, Nebr., Dec. 31, 1964 | 691.66      |
|                                                                                       | \$ 1,138.03 |

## SCHEDULE B-1:

### NEBRASKA STATE MEDICAL ASSOCIATION STATEMENT OF RECEIPTS AND DISBURSEMENTS ANNUAL SESSION YEAR 1964

|                              |            |
|------------------------------|------------|
| RECEIPTS:                    |            |
| Exhibits                     | \$4,868.85 |
| Banquet                      | 1,664.50   |
|                              | \$6,533.35 |
| Total Receipts               | \$6,533.35 |
| DISBURSEMENTS:               |            |
| Badges                       | \$ 69.49   |
| Exhibitors' Party            | 189.95     |
| Booths                       | 505.00     |
| Courtesy Room                | 69.10      |
| Banquet                      | 1,306.25   |
| Guest Speakers               | 4,232.41   |
| Auxiliary Expense            | 25.00      |
| Employees' Expense           | 128.85     |
| Past President's Breakfast   | 17.25      |
| Entertainment and Gratuities | 302.50     |
| Miscellaneous                | 665.61     |
| 50 Year Pins                 | 13.29      |
| Presidents' Reception        | 90.60      |
| Plaques Engraving            | 179.75     |
| Projector, Camera, Slides    | 327.00     |

Total Disbursements \$8,127.05

EXCESS OF DISBURSEMENTS OVER RECEIPTS \$1,593.70

## SCHEDULE B 2:

### NEBRASKA STATE MEDICAL ASSOCIATION COMPARISON OF GENERAL EXPENSE WITH BUDGET YEAR 1964

|               | Budget      | Actual Expense | Actual (Over) or Under Budget |
|---------------|-------------|----------------|-------------------------------|
| Salaries      | \$28,544.00 | \$28,543.65    | \$ .35                        |
| Payroll Taxes | 900.00      | 833.13         | 66.87                         |

|                                                       |             |             |          |
|-------------------------------------------------------|-------------|-------------|----------|
| Travel Expense, Employees --                          | 2,750.00    | 3,000.71    | (250.71) |
| Office:                                               |             |             |          |
| Rent -----                                            | 4,093.00    | 4,081.49    | 11.51    |
| Postage -----                                         | 1,400.00    | 1,737.85    | (337.85) |
| Telephone and Telegraph --                            | 1,600.00    | 1,385.15    | 214.85   |
| Office Supplies, Mimeographing and Printing --        | 850.00      | 1,091.49    | (241.49) |
| Annual Session -----                                  | 7,200.00    | 8,127.50    | (927.05) |
| Professional Fees -----                               | 1,890.00    | 1,344.71    | 545.29   |
| Dues in Other Organizations--                         | 440.00      | 640.00      | (200.00) |
| Insurance Expense -----                               | 130.00      | 91.11       | 38.89    |
| Printing and Publications ---                         | 1,500.00    | 1,763.72    | (263.72) |
| Officers' Expense -----                               | 2,900.00    | 2,085.23    | 814.77   |
| A.M.A. Expense (Delegate, Alternate and Headquarters) | 2,100.00    | 2,113.54    | ( 13.54) |
| Committee Expense and                                 |             |             |          |
| Travel -----                                          | 3,200.00    | 3,493.98    | (293.98) |
| Senior Medical Day -----                              | 625.00      | 606.00      | 19.00    |
| Dues, Share to Journal -----                          | 3,400.00    | 3,808.75    | (408.75) |
| Office Equipment and                                  |             |             |          |
| Furniture -----                                       | 800.00      | 799.08      | .92      |
| General Fund Expense -----                            | 1,500.00    | 625.45      | 874.55   |
| Publication Information                               |             |             |          |
| Programs -----                                        | 5,000.00    | 4,586.73    | 413.27   |
|                                                       | \$70,822.00 | \$70,758.82 | 63.18    |

#### SCHEDULE B-3:

#### NEBRASKA STATE MEDICAL ASSOCIATION STATEMENT OF RECEIPTS AND DISBURSEMENTS HALL OF HEALTH YEAR 1964

Unexpended Balance, Bank Balance, National Bank of Commerce, Lincoln, Nebr., Jan. 1, 1964 ----- \$ 413.23

#### RECEIPTS:

|                                             |           |            |
|---------------------------------------------|-----------|------------|
| Arthritis and Rheumatism Foundation,        |           |            |
| Nebraska Chapter -----                      | \$ 100.00 |            |
| American Cancer Society -----               | 100.00    |            |
| Nebraska Radiological Society -----         | 100.00    |            |
| Nebraska Tuberculosis Association -----     | 100.00    |            |
| Nebraska Sertoma Clubs -----                | 100.00    |            |
| Nebraska Heart Association -----            | 100.00    |            |
| Nebraska Dental Association -----           | 100.00    |            |
| Nebraska Psychiatric Institute -----        | 100.00    |            |
| Nebraska Society of Medical Technicians --- | 100.00    |            |
| Nebraska Diabetes Association -----         | 100.00    |            |
| Nebraska State Medical Association -----    | 100.00    |            |
| Nebraska Pharmaceutical Association -----   | 100.00    |            |
| Nebraska State Department of Health -----   | 300.00    | 1,500.00   |
|                                             |           | \$1,913.23 |

#### DISBURSEMENTS:

|                                            |           |
|--------------------------------------------|-----------|
| Nebraska State Fair and Exposition -----   | \$ 600.00 |
| Fred McDaniel, Labor -----                 | 150.00    |
| Bill Schellpeper, Labor and Supplies ----- | 50.00     |
| Gerald Copley, Labor -----                 | 65.00     |
| Fred McDaniel, Materials -----             | 6.88      |
| Gorham Photo -----                         | 37.00     |
| Electricity -----                          | 91.90     |
| Baker Hardware, Supplies -----             | 23.96     |
| United Rent-Alls, Chairs -----             | 50.00     |
| A.M.A. Exhibit -----                       | 108.54    |
| Davison Display Service -----              | 520.00    |
|                                            | 1,703.28  |

Unexpended Balance, Bank Balance, National Bank of Commerce, Lincoln, Nebr., Dec. 31, 1964 -- \$ 209.95

NOTE: The Hall of Health is jointly sponsored by the above organizations, and the records are kept by Nebraska State Medical Association. However, funds for this project are not properly a part of the association funds and are kept in a separate bank account.

#### EXHIBIT C:

#### NEBRASKA STATE MEDICAL ASSOCIATION STATEMENT OF RECEIPTS AND DISBURSEMENTS JOURNAL FUND YEAR 1964

Cash in Bank, January 1, 1964 ----- \$ 811.36

#### RECEIPTS:

|                                        |             |
|----------------------------------------|-------------|
| Advertising -----                      | \$20,332.67 |
| Subscriptions -----                    | 413.35      |
| Copies Sold -----                      | 14.50       |
| Dues, Share to Journal -----           | 3,808.75    |
| Associate Members' Subscriptions ----- | 140.00      |
| Journal Publication -----              | 3,058.75    |

Total Receipts ----- \$27,768.02

#### DISBURSEMENTS:

|                              |             |
|------------------------------|-------------|
| Salaries -----               | \$ 3,158.00 |
| Editor's Expense -----       | 966.50      |
| Printing of Journal:         |             |
| Publication Expense -----    | \$15,214.68 |
| Color -----                  | 5,873.97    |
| Inserts -----                | 285.84      |
| Cuts, Engraving and          |             |
| Art Work -----               | 655.93      |
| Press Clipping Expense ----- | 147.00      |
| Reprints -----               | 338.18      |

|                       |           |
|-----------------------|-----------|
| Cartoons -----        | 125.00    |
| Single Wrapping ----- | 117.24    |
| Cover -----           | 837.35    |
| Miscellaneous -----   | 784.19    |
|                       | 24,379.38 |

Total Disbursements ----- \$28,503.98

#### EXCESS OF DISBURSEMENTS

OVER RECEIPTS ----- \$ 735.96

Cash Balance, December 31, 1964 ----- \$ 75.40

#### Represented by:

Cash Balance, National Bank of Commerce, Lincoln, Nebr., Dec. 31, 1964 ----- \$ 75.40

#### EXHIBIT D:

#### NEBRASKA STATE MEDICAL ASSOCIATION STATEMENT OF INVESTMENTS YEAR 1964

Total Investments, January 1, 1964

Schedule D-1) ----- \$71,034.24

#### Increased by:

|                                                       |             |        |
|-------------------------------------------------------|-------------|--------|
| Increase in Value—U. S. Savings Bonds, Series J ----- | \$155.11    |        |
| U. S. Treasury Note, Matured at -----                 | \$14,027.56 |        |
| Cost of Note -----                                    | 14,012.72   | 14.84  |
|                                                       |             | 169.95 |

TOTAL INVESTMENTS, DECEMBER 31, 1964

(Schedule D-1) ----- \$71,204.19

#### SCHEDULE D-1:

#### NEBRASKA STATE MEDICAL ASSOCIATION STATEMENT OF INVESTMENT BALANCES DECEMBER 31, 1963 and 1964

|                                                                                                                         | 12-31-63   | 12-31-64    |
|-------------------------------------------------------------------------------------------------------------------------|------------|-------------|
| TRUST ACCOUNT: (Securities and Cash at Cost Value in Hands of National Bank of Commerce Trust and Savings Association): |            |             |
| Central and Southwestern Corp., 100 Shares Common -----                                                                 | \$1,358.44 | \$ 1,358.44 |
| General Electric Company, 120 Shares Common -----                                                                       | 3,623.35   | 3,623.35    |
| Houston Lighting and Power Company, 363 Shares Common -----                                                             | 3,898.08   | 3,898.08    |
| Standard Oil Company (N.J.), 100 Shares Common -----                                                                    | 6,441.40   | 6,441.40    |
| U. S. Steel, 60 Shares Common -----                                                                                     | 6,118.08   | 6,118.08    |
| Sears & Roebuck Bonds, 4½%, Due 8-15-83 -----                                                                           | 5,188.80   | 5,179.36    |
| U. S. Steel Bonds, 4%, Due 7-15-83 -----                                                                                | 4,962.50   | 4,962.50    |
| U. S. Treasury Bonds, 3⅞%, Due 11-15-71 -----                                                                           | 1,992.50   | 1,992.50    |
| U. S. Treasury Notes, 5%, Due 8-15-64 -----                                                                             | 14,025.44  |             |
| U. S. Treasury Notes, 4½%, Due 11-15-73 -----                                                                           |            | 13,901.56   |
| Principal Cash Account -----                                                                                            | 133.01     | 281.17      |

TOTAL TRUST ACCOUNT ----- \$47,741.60 \$47,756.44

#### U. S. GOVERNMENT BONDS:

|                                                                                                 |             |             |
|-------------------------------------------------------------------------------------------------|-------------|-------------|
| U. S. Savings Bonds, Series H -----                                                             | \$11,000.00 | \$11,000.00 |
| U. S. Savings Bonds, Series J, (Cost \$4,122, Maturity Value \$5,725) at Redemption Value ----- | 4,803.89    | 4,959.00    |
| U. S. Savings Bonds, Series K -----                                                             | 3,000.00    | 3,000.00    |
| U. S. Treasury Bonds, 4%, Due 2-15-72, (Maturity Value \$4,500) at Cost -----                   | 4,488.75    | 4,488.75    |

TOTAL U. S. GOVERNMENT BONDS ----- \$23,292.64 \$23,447.75

TOTAL TRUST ACCOUNT ----- \$47,741.60 \$47,756.44

#### TOTAL U. S. GOVERNMENT

BONDS ACCOUNT ----- 23,292.64 23,447.75

#### GRAND TOTAL OF TRUST ACCOUNT

AND U. S. GOVERNMENT BONDS ACCOUNT ----- \$71,034.24 \$71,204.19

#### EXHIBIT E:

#### NEBRASKA STATE MEDICAL ASSOCIATION JOURNAL ACCOUNTS RECEIVABLE DECEMBER 31, 1964

|                                                |            |
|------------------------------------------------|------------|
| Lincoln Splint and Brace -----                 | \$ 7.00    |
| Kersten Clinic -----                           | 4.50       |
| Johnson Clinic -----                           | 3.50       |
| Stahlut Drug -----                             | 3.50       |
| St. Paul Medical Center -----                  | 5.50       |
| State Medical Journal Advertising Bureau ----- | 4,037.72   |
|                                                | \$4,061.72 |



## REPORT OF THE EDITOR

The Editor submits the following report for the year 1964.

There have been no major changes in format and makeup of Volume 49, 1964. The number of pages increased very slightly — from 700 to 710. This naturally follows as we pay more attention to the "Organization Section."

The total number of scientific or clinical articles was 68. They were produced by 91 authors as compared to 93 last year. The number of editorials was 46, including the "President's Pages," and more were written by others than by the Editor. As noted last year, this gives expression to a wider range of personal ideas than when the Editor writes nearly all of them.

Again, it must be mentioned that the JOURNAL received practically none of the material presented at the Annual Session. We get many more articles from the Omaha Mid-West than from our own meeting. We have been fortunate in having many articles offered to us by individuals, both members and non-members of the Nebraska State Medical Association.

As always we have had the utmost in cooperation from the News Printing Company. They have been both cooperative and helpful.

Respectfully submitted,  
GEORGE W. COVEY, MD,  
Editor.

## REPORT OF EXECUTIVE SECRETARY

An extremely busy, intensive and critical 1964 has now become history. During the past year, the activities of the Nebraska State Medical Association were at an all-time high. Committee activities, projects, and travels of the Officers and Association staff set new records.

In the following report, I will try to summarize these activities in general as in some instances they will be specifically discussed in individual committee reports.

### LEGISLATION — NATIONAL

The Administration has made its health proposals to Congress in the form of the King-Anderson bill. They have been designated HR 1 in the House and S 1 in the Senate.

However, in a historic announcement, Dr. Donovan F. Ward, President of the American Medical Association, laid the ground work for a program of complete health care designed to preserve the foundations of our free medical system which must be preserved if the system is to endure.

The program was proposed following top level meetings with representatives of the American Hospital Association, Blue Cross and Blue Shield, the Health Insurance Association of America and the American Dental Association.

Under the new program, an over-65 citizen would purchase through private carriers a wide spectrum of medical, surgical and hospital benefits, and would pay all or none of the cost of the policy depending on his income. For individuals with incomes

under the specific minimums, the state agency, using federal and state funds, would pay the entire cost.

The plan is designed to assure that every person over 65 whose income is insufficient to pay for coverage will receive help from public funds.

Aid would consist of comprehensive health care benefits rather than being limited to hospital and nursing home care, representing only a fraction of the cost of sickness. Benefits for eligible recipients would include not only payment of hospital and nursing home charges, but also payment of medical surgical and drug costs.

Eligibility for benefits would be determined quickly and readily without the necessity for a welfare department type of investigation. It would be determined on the basis of the applicant's simple income statement. Under this method, an individual would qualify for help before illness strikes.

In promoting this program, Dr. Ward emphasized that we are maintaining our basic position that (1) all those over 65 who need help in paying for health care should receive it; (2) in providing this help the relations between the states and the federal government should be preserved with maximum responsibility and authority delegated to the state rather than to a centralized Washington authority; and (3) voluntary health insurance and prepayment principles should be utilized whenever possible.

This is a program which organized medicine can vigorously support and it behooves every physician, his wife, family and friends to work untiringly for the passage of this bill. An intensive campaign in support of this proposal will be carried out, and we know we can count on each of you to assist.

### LEGISLATION — STATE

On the state level, the Kerr-Mills program finally got under way in Nebraska on April 1st. The program picked up patients from January 1, and has been in operation during the past year at less than desired level. There is considerable confusion in our opinion as to the operation of Kerr-Mills in Nebraska because the bill too closely resembles that of the Old Age Assistance program. I have received numerous letters from the members who indicate that their patients who appear to be eligible for Kerr-Mills have been placed on Old Age Assistance. There is further indication that the program is not actively supported at the County Welfare level. I would have to agree that the program does follow the Old Age Assistance lines very closely, but I would also remind you that this bill was drafted by the Department of Public Welfare. This program cannot be of great value to the people until it is revised and no longer competitive with Old Age Assistance.

Considerable effort is being made to change some provisions in the Kerr-Mills program. We hope to encourage the elimination of the deductibles on the semi-annual basis and place on an annual basis or possibly eliminate them altogether. It is anticipated that some nursing home care will be included for next year. It appears that the Kerr-Mills program would benefit further by eliminating the claims which are placed on the recipient's property



under the present bill. This item has confused many people. We also feel there should be an increase in the income allotments. The income limits of \$1,500 for single person and \$2,100 for a married couple appear to be too low as do the other cash assets allowed. Another problem is the family responsibility clause. The local county welfare agency has been given full prerogative to determine the income for family responsibility, but there appears to be little or no uniformity in the counties in making this determination. This, we feel, should be either established at the state level or possibly should be eliminated. This is a state and federal participation program and we feel that all rules and regulations relating to this program should be determined at the state level.

In 1964, the Nebraska State Medical Association was represented on one of the Governor's Committee on Children and Youth. This particular committee studied four subjects; Voluntary and Involuntary Termination of parental rights; Adoption; and the Battered Child. The purpose stated at the origination of these committees was to study whether or not there was a need for new laws and/or improvement of existing laws. However, right from the beginning it was apparent that new legislation and changes were going to be made and it was up to the committee to make these decisions. The first draft of a Battered Child Law presented was written by the Childrens Bureau of the HEW and was entirely unacceptable to the Association. After many meetings, the committee approved a bill which we felt was acceptable to organized medicine. The bill closely resembles recommended legislation prepared by the American Medical Association. There was not great favor on the part of our Association to have such a bill introduced; however, it was apparent that some form of this legislation was going to be considered and we felt it better to guide this work rather than to oppose it and have something written which we would not be able to support. Copies of this bill will be distributed after it has been introduced. In addition, there is a possibility that a bill requiring compulsory PKU testing of newborn children will be introduced. The A.M.A. has taken a stand in opposition to this as they feel it is not necessary to have mandatory legislation on this test any more than it would be to have certain immunizations made compulsory. It is our understanding that the Nebraska Pediatric Society has also taken a similar stand. We will have to wait and see if legislation is introduced before we determine our stand on this issue.

As in the past, we may expect an increase in the number of pieces of health legislation introduced. It is estimated the legislative session will be longer this year with the prospective number of bills now reaching 1,000, according to some observers. We will review all such bills relating to medicine and public health very carefully, as will our legal counsel in order to determine what action is necessary on each piece of legislation. In turn, we are going to ask you to be alerted and contact your Legislator on specified issues. Some bills will not be difficult to handle; on the other hand, we can expect some controversial legislation. In any event, the opening of the 1965 Nebraska Legislature means a substantial increase in our legislative activities and we are going to rely on you to assist us on many of these issues.

## 1965 ANNUAL SESSION

The make-up of the 1965 Annual Session is almost complete, and again the Scientific Sessions Committee has exerted considerable effort to prepare a fine program in the scientific field. The meeting will be held in Omaha during the week of April 26 through 29, at the Sheraton-Fontenelle Hotel.

At the 1964 Annual Session, an invitation was extended to the Auxiliary to be present for the Keynote Address on the opening day of the Session. The Auxiliary has again accepted our invitation for 1965 to be present for this very important part of our meeting at which time Dr. Donovan F. Ward, President of the American Medical Association, will be the speaker. In addition, the ladies will remain with us for the noon luncheon at which time Senator Carl Curtis is scheduled to speak.

A new category will be introduced at the 1965 program for the first time. This will be a program on Medicine and Religion which will be presented on Thursday morning, the final day of the Annual Session. The participants, Rev. Dr. Paul B. McCleave, Director of the Department of Medicine and Religion of the A.M.A., and Dr. Rex E. Kenyon, Chairman of the Committee on Medicine and Religion of the Oklahoma State Medical Association, will discuss the relationship of Medicine and Religion. The committee plans to invite not only the physicians and their wives, but clergymen and other individuals in the health field to this program. There appears to be a tremendous amount of interest in this particular subject; and for this reason, the Association has rented the Music Hall at the Civic Auditorium in Omaha for this presentation. We anticipate possibly 1,000 persons in attendance. We certainly hope that you will make plans to attend this most noteworthy occasion.

## NEBRASKA STATE MEDICAL JOURNAL

The Nebraska State Medical Journal, which was first published in 1915, serves as the official publication of the Nebraska State Medical Association. During the past several years, the Journal has suffered financially due to the fact that a considerable number of the pharmaceutical companies have drastically reduced their advertising budgets and due to the fact that a number of national throw-away journals have emerged and provided extreme competition for the advertising dollar. Because of this, it has necessitated the additional financing by the Association over and above the \$2.50 which is normally taken out of dues for the Journal. It is difficult to say what will happen in the advertising field during 1965, but we do understand that some changes, at least for the better, may be anticipated for the coming year. Despite the reduction in the advertising income, the Journal has still maintained its high quality, both in content and in production. We hope that it serves as an interesting and informative publication to you as a member; and we would be pleased to receive any suggestions or comments relating to additional matters which we might publish in the Journal or any other comments that you might wish to make.

## FIRST ANNUAL CONFERENCE

A very successful First Annual Conference of

State and County Medical Society Officers was held in Kearney, on September 30 and October 1, 1964. To this conference was invited state officers, Councilors and presidents and secretaries of all county medical societies. A registration of 60 at the meeting gave us a good representation; although, we could have had better attendance from the county medical society level. The main theme of the program was to acquaint the officers at all levels of organized medicine in Nebraska with the problems and programs of the Nebraska State Medical Association. It was also an effort on the part of the officers to determine in what ways they could better assist the county medical societies in carrying out state programs. The presentations were made by elected officers, Committee chairmen, a representative of Blue Cross-Blue Shield, a representative from the American Medical Association, and the Dean of the University of Nebraska College of Medicine. We believe it was a most worthwhile conference and that each participant was given a better idea of the scope of activities of this Association. As a follow-up, a questionnaire was sent out to all those who attended the conference asking for their comments and whether or not they felt it was a worthwhile program that should be continued. All questionnaires received indicated a desire for this conference to be held on a yearly basis. Plans will be made for the Second Annual Conference. We feel it has been a most worthwhile effort and one which is needed in view of the expanding scope of our activities.

#### NEBRASKA MEDICAL FOUNDATION

Usually a report on the Nebraska Medical Foundation does not appear in the audit; however, I felt it was appropriate in view of the expanded loan program which the Foundation approved in March of 1964. For your information, I will give you a brief review of Foundation activities in 1964.

At the 1964 Mid-Winter Meeting of the Board of Councilors, who also serve as the Board of Trustees of the Nebraska Medical Foundation, an expanded loan program of the Nebraska Medical Foundation was approved. The Foundation then entered into an agreement with the First National Bank and Trust Company of Lincoln, Nebraska, whereby the bank will loan \$12.50 for every dollar of reserve which the Foundation places on deposit. The loan assets of the Foundation, plus several donations from county medical societies, enabled the Foundation to begin a loan program with a \$350,000 fund.

During 1964, 51 students were given loans amounting to \$57,300. Loans are available to students of medicine, medical technology; and we are in the process of implementing a program for X-ray technology. A loan program is also planned for nursing.

During 1964, we received repayment on loans which the Nebraska Medical Foundation made under its old loan program, amounting to \$5,128.20.

In addition, we received \$11,381.74 from contributions, making a total receipt of Foundation money during 1964 of \$16,509.94.

A new brochure was printed and distributed to each member of the Association and the Auxiliary late in 1964. In addition to this, we plan to circulate the legal profession, mortuaries, corporations,

and individuals in an effort to seek a steady flow of income for the loan program of the Foundation. The major purpose being to reduce the interest rate which the students pay at this time. The current interest is prime rate which at the present time is 5½%. This interest is charged during the student's educational period. Once he has completed his education period, then he signs a payout note which draws one additional per cent interest or 6½%. He is given up to 10 years to pay this note. A medical student may borrow as a second semester freshman and may continue to borrow through internship and residency. The program permits the student to borrow \$1500 per year up to a maximum of \$10,000. As indicated before, the Foundation is desirous of reducing the 5½% simple interest rate while the student is in training. We hope it will eventually be reduced to 3% or even less where it will be equal to interest rates being charged for Health Professions Loans which the government is now making available on a matching basis with Nebraska funds. However, it will take a guaranteed flow of income to finance this particular project. If you know of any corporations or individuals who might be interested in contributing to the Foundation, either through a will or cash contribution, we would be most happy to receive information on them. Remember that for every dollar the Foundation receives, we can loan out \$12.50 to some worthy student.

#### ADMINISTRATION

There has been an avalanche of meetings on the local, state and national levels which have necessitated the attention and attendance of staff and the officers of the Nebraska State Medical Association. My assistant and myself attended 127 meetings in 1964; and they are broken down as follows:

- 69—Committee Meetings
- 31—Miscellaneous Meetings
- 12—County Medical Society meetings
- 15—National Meetings

The 15 national meetings necessitated being out of the state for a total of 32 days. In attending the national meetings, we traveled 19,500 miles, and we traveled 7,000 miles within the state, making a total of 26,500 miles traveled on Association business during 1964.

This, I believe, gives you a fair indication of the activity and time spent by the staff in keeping abreast of current happenings at all levels of organized medicine. In addition, there is the day to day operation of the Association which must be kept running smoothly in order to handle daily work load.

I wish to add at this point that the President and President-elect of this Association should be commended for their interest and attendance at a large majority of these meetings. Their guidance has been most fruitful for this Association.

In addition, 15 committee chairmen attended national meetings of interest to the activities of their particular committee. By virtue of their attendance, they have been able to bring back the thinking at the national level so this information can be implemented or utilized to the best possible extent in the programs of organized medicine in Nebraska.



The officers of the Association have approved the installation of a teletypewriter exchange service (TWX) equipment in the Association office which is in line with a proposal made by the American Medical Association at the San Francisco meeting in June, 1964. At that time, the American Medical Association recommended that all states have this type of equipment installed for instant communications. At the Miami meeting, the House of Delegates approved the project. All installation costs and yearly rental costs will be absorbed by the American Medical Association. The only costs incurred by the Association will be those dispatches which originate from this office. The cost is very nominal. For instance, a 900-word message from Lincoln, Nebraska to Chicago by TWX will cost the Nebraska State Medical Association \$2.80. If we sent the same telegram by straight wire, it would cost in excess of \$73.86; and if we sent it by night letter, it would cost us \$9.53. In further checking, we find that the TWX system is also approximately 25% cheaper than telephone calls, so we anticipate a savings in our long distance communications by the use of this machine. In addition, we will be able to communicate with all TWX stations in the entire country and Canada, and it will provide instantaneous communication as the machine is capable of operating automatically on a 24-hour basis. We feel this will be a fine supplement to the communication system of the Association and allow us to keep alert on all activities regardless of where they may be.

#### MEMBERSHIP

|                                                     |       |
|-----------------------------------------------------|-------|
| Active Members -----                                | 1,230 |
| Life Members -----                                  | 104   |
| Service Members -----                               | 1     |
| <hr/>                                               |       |
| Total -----                                         | 1,335 |
| Less: Deceased Members -----                        | 25    |
| <hr/>                                               |       |
| Total -----                                         | 1,310 |
| A.M.A. Membership -----                             | 1,199 |
| Potential Members -----                             | 34    |
| New Members -----                                   | 53    |
| <hr/>                                               |       |
| Total New Doctors Moved Into<br>State in 1964 ----- | 87    |

#### CORRESPONDENCE

Incoming mail for the year 1964---- 8,605  
 Outgoing mail for the year 1964 ----48,088  
 Respectfully submitted,  
 KEN NEFF,  
 Executive Secretary.

#### REPORT OF BOARD OF TRUSTEES

M. E. Grier, M.D., Omaha, Chairman; Horace V. Munger, M.D., Lincoln; H. V. Nuss, M.D., Sutton; C. N. Sorensen, M.D., Scottsbluff; J. M. Woodward, M.D., Lincoln.

The Board of Trustees met four times during 1964. The meetings on February 23 and during the annual session were concerned with routine matters. The Board of Trustees attended the annual Conference for State and County Medical Society Officers held in Kearney, Nebraska, September 30 and Octo-

ber 1st. The Board held its Fall meeting in that city.

The quarterly report of the Association's investment Portfolio was presented, showing a market value of \$73,038.53. Mr. Neff presented at this meeting the results of a job analysis on the staff personnel. He advised some changes in the clerical personnel which were approved by the Board.

The December meeting was held on the 13th at Lincoln, Nebraska, at which time there was no unfinished business.

Mr. Neff presented a review of the November financial statement and indicated that the Association would be able to remain within its 1964 budget.

The quarterly report of the investment program revealed a market value of \$73,248.04.

Dr. Garlinghouse read a letter from the Student A.M.A. at the University of Nebraska, requesting a grant of \$300.00 to help defray travel expenses of their chapter in visiting high schools in a recruitment program for the Medical School.

Dr. Garlinghouse has appointed Dr. R. F. Sievers as official liaison physician between the State Medical Association and the Student A.M.A. A letter from Dr. Sievers had been received, supporting this request. On motion, the grant was approved and the check was given to Dr. Sievers.

The 1965 Budget was presented. Discussion of the Journal Budget indicated that an additional \$2,700 would be required to support the Journal. With this, the estimated income would be \$29,000 and the estimated expenses \$28,700.

The Budget for the Nebraska State Medical Association was presented and represents an approximate increase of 4.4% over the 1965 Budget.

Some additional expense is to be anticipated, since this is a legislative year.

Following discussion, the Budget in the amount of \$74,089 was approved for 1965.

The estimated income for 1965 is \$77,450. Some needed additional office equipment was requested and the purchase approved. Salaries for the Executives were approved for the next year, as was also the Annual Bonus for Dr. Covey.

There being no further business, the December 1964 meeting was closed.

Respectfully submitted,

MAURICE E. GRIER, MD,  
 Chairman.

#### DELEGATE'S REPORT — PROCEEDINGS OF THE HOUSE OF DELEGATES AMERICAN MEDICAL ASSOCIATION 18TH ANNUAL CLINICAL MEETING

The Eighteenth Clinical Convention of the American Medical Association was held at Miami Beach, Florida, November 29 to December 2, 1964. Your officers, delegates and members of our State Association who were in attendance were unanimous in their belief that the various meetings were conducted in a high degree of efficiency, resulting



in effectual policy-making and in scientific programs which were most noteworthy in the portrayal of advances made in the overall field of medicine. The scientific and technical exhibits as well as motion picture programs were highly acclaimed.

Final registration at the Convention totaled 9,356 and of this number 4,118 were physicians.

The House of Delegates devoted the entire morning of November 30th in session; the afternoon was set aside for the purpose of permitting the delegates and officers as well as any member of the AMA who so desired to attend the meetings of the respective reference committees. The house reconvened on December 2nd.

The highlight in the agenda for the House of Delegates was the address of Donovan F. Ward, MD, of Dubuque, Iowa, President of the AMA. Doctor Ward was elected at the annual convention in June 1964 and would not, under ordinary conditions, take office until the annual convention of 1965. However, because of the sudden and untimely death on September 3rd of President Norman A. Welch, MD, while attending the annual meeting of the Wyoming State Medical Society, Doctor Ward immediately assumed the office of President. He will retire during the 1965 annual convention.

It would be impossible in this report to include in its entirety Doctor Ward's brilliant Presidential address, but it might be well to quote the following:

"I call upon all American physicians again to prove that medicine is an institution of service to all mankind; that we are dedicated to providing the best possible medical care to all our patients; that we cannot fulfill this aim if progress and practice in medical care are to be stifled by excesses of government control.

"I urge each of you, and your colleagues in the state and county societies, to join in this renewed effort. The history of the long and bruising struggle we have been through over this question has taught us that the more people know about direct federal intervention in the field of health care, the less they will support it.

"We have no choice except to stand firm in our efforts to prevent the standards of health care in this country from being undermined by a radical departure from the unique American way which has accomplished so much for mankind.

"If we have been right in the past — and that is our unshakeable belief — then we are right today. And we shall be right tomorrow . . . We do not, by profession, compromise in matters of life and death. Nor can we compromise with honor and duty . . . No more can be asked of us as citizens. No less should be offered by us in guarding our heritage of freedom."

Doctor Ward was given a prolonged standing ovation following his address.

To fulfill some of the ideas expressed by Doctor Ward, the House called for an expanded educational program to be conducted during the next few months, and adopted a resolution which urged "component associations to stimulate the state and local governments to seek the fullest possible implementation of existing mechanisms, including the volun-

tary health insurance principle, to the end that everyone in need, regardless of age, is assured that necessary health care will be available." Considerable time and discussion were given to furthering and expanding the Kerr-Mills programs, taking into account the differences to be found in the implementation of the law in the respective states.

This year contributions to the AMA-ERF reached a new height. Seven state medical associations contributed \$493,459.04; Merck Sharp and Dohme added their fourth \$100,000 contribution and announced an additional pledge of \$100,000 during 1965. Wyoming's contribution of \$5,000 was earmarked for the Doctor Norman A. Welch Memorial Fund, which is a part of the student loan program. During the first eleven months of 1964, \$1,216,848 was contributed by state societies, individual physicians, women's auxiliaries and other medically related organizations. One of every six students, interns and residents in the United States now secure financial assistance from the AMA-ERF loan fund. This fund has guaranteed a total of more than 25 million dollars and during the past year has guaranteed approximately seven hundred thousand dollars each month in loans.

The House of Delegates approved the following and amended the By-laws accordingly:

1. Change the title of "Annual Meeting" to "Annual Convention."
2. Permit the inauguration of the President to take place at a time other than Tuesday evening. This ceremony will be held on Sunday, June 20, during the 1965 convention.
3. Present the Distinguished Service Award at the Scientific Awards Dinner rather than during the meeting of the House of Delegates.
4. Fill vacancies on standing committees of the House of Delegates and in the offices of Vice President, Speaker, Vice Speaker and Trustees by appointment by the Board of Trustees until an election is held to fill these offices.
5. Install the Vice President rather than the President-elect to the office of President upon the death, resignation or removal from office of the President.
6. Create a Section on Allergy.

Other positive actions by the House of Delegates:

1. AMA dues shall not be increased.
2. Adopted a simplified health insurance claim form.
3. Accepted the recommendation of the Board of Trustees for establishment of a tele-typewriter communications service between the AMA and state medical societies' headquarters. This will provide automatic and uninterrupted communication between AMA headquarters and all participating state societies, and between individual state societies, the latter to be direct without involving the facilities of AMA. This plan is optional with state medical societies. Installation and rental costs, both at AMA headquarters and the headquarters of each participating component society, will be paid by the AMA. The only cost to the state societies will be that for transmitting messages, this to be paid by the organization originating the message. A tele-typewriter

exchange rate for a 900 word message between headquarters of the Nebraska State Medical Association and AMA headquarters would be approximately \$2.80. It is believed that this communication system will be operative no later than July 1965.

4. Cooperate with the United States Public Health Service in eradicating the *Aedes aegypti* mosquito from the American hemisphere.

5. Reaffirmed its approval and support of the National Council for Accreditation of Nursing Homes.

6. Approved 33 recommendations of the Commission on the Cost of Medical Care, the Commission noting "that the recommendations which were approved will help promote the wisest possible use of the medical care dollar and aid in the development of more meaningful data on the cost of medical care."

7. Recognized the need to take a more positive position on population control — a medical, social, and economic problem — through cooperation with voluntary organizations in the field of human reproduction, these organizations to have adequate medical direction.

8. Urged strong support of the Woman's Auxiliary of the AMA and asks the state and county medical societies to give serious consideration to the idea of joint husband-wife membership. The Woman's Auxiliary received many compliments for the wonderful work that they are doing.

It seems to your delegate that these were some of the more important of many general actions taken by the House of Delegates.

Thirty-eight resolutions were introduced, of which number five were withdrawn. The following actions by the House warrant recognition in this report:

Resolution Number One, presented by the Nebraska State Medical Association relative to the untimely death of President Norman A. Welch, MD, was unanimously adopted by standing vote of the House as a committee of the whole.

Resolution urging all state and component medical associations to approve, where feasible, the inclusion of a voluntary nondeductible contribution to independent political action committees (AMPAC and state political action committees) on the societies' annual dues billing statement was approved.

Loan funds for student nurses — the reference committee recommended that this resolution be referred to the Board of Trustees and that the overall role of the medical profession in encouraging careers in nursing be thoroughly reexamined.

A resolution regarding racial discrimination in medical society membership and hospital staff appointments reaffirmed a clearcut policy already adopted by the AMA opposing racial discrimination.

Two resolutions having to do with correct patient billing for laboratory services were referred to the Judicial Council for further consideration and implementation.

A resolution titled "General Practitioners to Meet the Medical Needs of the American Public" was approved as amended by the reference committee on

Medical Education and Hospitals, which now reads as follows:

"Resolved, that the House of Delegates again emphasizes its continuing awareness of the demand for action on satisfying the need for increasing numbers of family physicians. It is the wish of the House of Delegates that the Committee on Education for Family Practice be charged fully by the Council on Medical Education: To review all aspects of the problem of education for family practice; to cooperate with all existing commissions and committees of this Association and other appropriate organizations and individuals properly concerned with the same problem; to meet as frequently as indicated; to have available staff assistance adequate to its needs; and to provide through the Council on Medical Education a report of progress to the House of Delegates at the Annual Meeting in June, 1965, with recommendations for specific actions."

Due to the death of President Norman A. Welch, MD, and the elevation of Donovan F. Ward, MD, to the office of the Presidency, it was necessary to name a President Elect. James Z. Appel, MD, of Lancaster, Pennsylvania, a family physician, was elected to this office. Your delegates gave active support to his election. Doctor Appel for many years has given of himself beyond the call of duty toward the accomplishments made in advancing positive policies influencing Medicine at the local, state and national levels. He was currently serving as Vice Chairman of the Board of Trustees.

Joseph B. Copeland, MD, Austin, Texas, was elected to the Board of Trustees to fill the vacancy created by the resignation of Doctor Appel from the Board after being chosen President Elect. Wesley W. Hall, MD, Reno, Nevada, was elected Vice Chairman of the Board of Trustees, and Homer L. Pearson, MD, Miami, Florida, was made a member of the executive committee of the Board.

Future meeting sites for the AMA conventions are as follows:

#### Annual Convention—

1965—New York  
1966—Chicago  
1967—Atlantic City  
1968—San Francisco

#### Clinical Convention—

1965—Philadelphia  
1966—Las Vegas  
1967—Houston, Texas

### RECOMMENDATIONS

1. That all members of the Nebraska State Medical Association read Doctor Ward's complete address, which will be found in JAMA under date of December 14, 1964, Volume 190, Number 11, Pages 982 to 985.

2. That the Nebraska State Medical Association lend all efforts in implementing the Kerr-Mills Law and Voluntary health insurance principles.

3. That dues paid by members of the Association include individual contributions which could be given as a whole from Nebraska physicians to the AMA-ERF.



4. That the Nebraska State Medical Association review and revise the By-laws in regard to vacancies in offices to coincide with the revised By-laws of the American Medical Association covering this subject.

5. That the tele-typewriter communication service between headquarters of the Nebraska State Medical Association, the American Medical Association and other component societies be established.

6. That a husband-wife membership be instituted by the Nebraska State Medical Association.

7. That consideration be given to include in membership dues voluntary contributions to independent political action committees.

8. That the membership take cognizance of future conventions of the AMA as contained in this report, with the hope that as many as possible will attend one or all of these conventions. Members should not forget that all are eligible to attend meetings of the House of Delegates and those of the reference committees.

This report terminates my office as one of the two delegates from the Nebraska State Medical Association to the American Medical Association. Through the years as delegate I have held many offices within the framework of the AMA and have been associated with the most dedicated gentlemen — officers, policy-making bodies and administrative staff of our parent organization. I have the firm belief, because of these experiences, that AMA has been and is performing a splendid service to the overall practice of Medicine as well as to the 198,239 members which it serves.

May I extend to the House of Delegates and members of the Nebraska State Medical Association my sincere appreciation for their confidence in my abilities to fulfill the exacting duties of this high office. Most important to me have been the warm friendship, helpful counsel and cooperation from my past and immediate confreres in the Nebraska State Medical Association, to wit: — Doctors Roy Fouts, Karl Hohlen, Earl Leininger, Harold Morgan, William Kenner, George Covey, Arthur Offerman and Messrs. Merrill Smith and Ken Neff.

I trust that my successor as Nebraska delegate to AMA, J. R. Schenken, MD, will receive the full support of officers and members of the Nebraska State Medical Association and that the splendid work of Earl Leininger, MD, as delegate to the AMA will retain him in this office indefinitely.

Respectfully submitted,

J. D. McCARTHY, MD,  
Delegate.

#### REPORT OF DELEGATE TO THE NORTH CENTRAL CONFERENCE

Your delegate was again privileged to attend the North Central Medical Conference on November 8, 1964 in Minneapolis, Minnesota. An interesting and diversified program was presented.

Dr. Ernest B. Howard of the American Medical Association gave a short resume of the various programs of the AMA.

Mr. Jule M. Hannaford, legal counsel for the

Minnesota State Medical Society, discussed taxing of our "unrelated income." Mr. Hannaford, a perennial speaker at the North Central Medical Conference, pointed out the Internal Revenue Service attitudes in this particular category.

An extremely interesting discussion of the problems of Civil Defense was made by Alvin Sach-Rowitz, MD, of Moose Lake, Minnesota. Dr. Sach-Rowitz emphasized that the problems of those engaged in Civil Defense preparation were increasing in direct proportion to the complacency of the general population.

Mr. John C. Foster, now of Phoenix, Arizona and formerly Executive Secretary of the South Dakota State Medical Society, gave a paper on "Organizing a Method of Taking Kerr-Mills Out of Welfare." In his discussion Mr. Foster suggested that a separate agency be developed for the administration of the Kerr-Mills program.

A panel discussion on "New Developments in Optometry, Podiatry, Nursing, Chiropractic, Osteopathy, and the Ownership of Pharmacies" was given by several members of the North Central Medical Conference. Among those discussing particularly the osteopathic problem was our President Elect, Dr. Willis D. Wright of Omaha, Nebraska, who discussed the osteopathic school survey being conducted by the State of Nebraska with reference to the eligibility of osteopathic graduates "to take board examinations.

In the afternoon session, Dr. L. O. Simenstad of Osceola, Wisconsin, presented a report from the Board of Trustees of the American Medical Association. His talk was primarily to outline the work being done by the Board of Trustees.

Dr. Joe Miller of Chicago, Illinois gave a rather discouraging review of the November election as viewed by AMPAC.

Dr. R. A. Buchanan of Huron, South Dakota, President of the North Central Medical Conference, gave a memorial to the late Dr. Norman A. Welch. Dr. Welch was to have been the principal speaker for the North Central Medical Conference in 1964. Dr. Buchanan pointed out that Dr. Welch was well known to all Americans as a representative of medicine at its best. He was a skillful and trusted physician, a distinguished leader of the House of Delegates, the elected spokesman for physicians, and a close personal friend of many conference members.

In the business meeting which followed the regular program your delegate was installed as the 1965 President of the North Central Medical Conference.

Respectfully submitted,

PAUL J. MAXWELL, MD,  
Delegate.

#### REPORT ON SECOND NATIONAL CONFERENCE ON CARDIO- VASCULAR DISEASE

The Second National Conference on Cardiovascular Diseases was held November 22 through 24, 1964, at the Sheraton Park Hotel in Washington, D.C. The meeting was co-sponsored by the American Heart Association, the National Heart Institute and



the Heart Disease Control Program of the United States Public Health Service. The purpose of the conference was to assess the developments in training, community service and research in the field of heart disease which have occurred since the first meeting 15 years ago. Secondly, it was hoped that this conference would identify the needs and opportunities in research, in training and in the application of knowledge.

Prior to the meeting, four hundred scientists developed summaries and interpretations of developments in the cardiovascular field since 1950. These were published in three volumes, two pertaining to research and the third to community service and education. The total pages in the research section were 1354 and in the volume on service and education 569. These pre-printed reports were distributed to all members of the conference prior to the meeting and at the November meeting, 500 invited experts reviewed and discussed these advance reports with the purpose of identifying areas not covered, stressing particular areas and discussing methods of implementing the report.

On the first day of the meeting, the 500 scientists were divided up into divisional areas, fifty in number, each chaired by an outstanding scientist in the given field. For example, Victor A. McKusick of John Hopkins chaired the "Genetic Factors in Cardiovascular Disease;" Carl F. Schmidt, "The Pharmacology of the Heart;" Jessie Edwards, "Pathology of the Cardiovascular System;" Charles T. Dotter, "Radiology;" Robert W. Wilkins, "Hypertension;" George E. Burch, "Heart Muscle Disease;" etc. The foregoing were all in the field of research. In community service and education, Jeremiah Stamler chaired the area of arteriosclerosis; Sibley W. Hoobler, hypertension pregnancy toxemia and renal disease; W. Proctor Harvey, Medical education, etc. These discussions lasted approximately three hours and at the end of that time an elected recorder in each section added to or amended the pre-print reports and these reports were then distributed the following day for further evaluation. In the afternoon of the 22nd, the first plenary session was held, at which time Ralph E. Knutti, Director of the National Heart Institute; Paul D. White, the Honorary Chairman; Luther L. Terry, the Surgeon General; John J. Sampson, Past President of the American Heart Association; John E. Fogarty, Chairman of the Finance Committee of the U.S. House of Representatives, all pointed out the importance of the Conference and what it could do, not only to identify the progress that has been made, but to focus upon the future needs and the best methods of implementing them. Finally, Herbert E. Klarman of John Hopkins University spoke on "Socioeconomic Impact of Heart Disease." On Monday, the 23rd, there were group discussion meetings from 9 a.m. to 2 p.m. These discussion meetings were combined from the previous division meetings and were twelve in number and were held to consider the pre-printed reports; the conclusions of the division meetings were background material, and from this, a summary of the conclusions of these groups was to be presented to the closing plenary session on Tuesday morning. An example of these discussion groups was that of "The Heart Muscle and Circulation," which consisted of a panel chaired by George E. Burch and members: Robert

E. Olson, H. S. Mayerson, William C. Manion, Louis N. Katz and Thomas C. Givson. Against the panel were played the ideas and discussions of another 35 to 40 men in that group. "Congenital Heart Disease" was chaired by Helen C. Taussig, with discussants: Eugene Braunwald, Jesse E. Edwards, Israel Steinberg and John W. Kirkland. "Training and Education" was chaired by Charles E. Kossmann, with panel members: W. Proctor Harvey, Robert W. Berliner, J. Willis Hurst, Gustav O. Kruger, Howard P. Lewis, George S. Mirick and John R. Stapleton. On Monday evening the 23rd, a conference dinner was held. John McMichael, Post-Graduate Medical School of London, England, presented an address, "Men, Research and Opportunity." On Tuesday, November 24th, the second plenary session was called together, presided over by Charleton B. Chapman, President of the American Heart Association. Summaries and recommendation were then given in the field of Training by Charles E. Kossmann, in Community Service by J. Gordon Barrow, and in Research by Irvine H. Page. There were concluding remarks by Abel Wohlman, Professor Emeritus of Sanitary Engineering at the John Hopkins University.

I was personally assigned to the division topic of "Respiratory Function and Pulmonary Disease," and into the group topic "Pulmonary Function." I will not discuss our panel specifically, but will rather give a summary of the entire recommendations of all division and group discussions.

#### I. The following is a summary in the field of EDUCATION AND TRAINING:

The explosion in research has paradoxically brought about a need for broader training programs and for the involvement of more individuals in these programs. Unfortunately at the same time, there has been increasing difficulty in filling empty funded faculty positions. In the 1963-64 academic year, there were 950 positions empty in the United States. Additionally there is need for 20 new medical schools and only 12, with a total of 650 students, are on the boards. These students will not be available for 6 to 9 years following the beginning of the first freshman course. It is against this background of need for expansion of the training program and the production of more well-trained physicians that the recommendations of this session are made. The recommendations of this group are as follows:

a. The research fellowship often comes too late; there is more need for premedical and student fellowships. There is also a need for combined PhD and MD programs, which has already been implemented in some areas. The consideration here is that many times Fellows begin their specialized training in research after several years of residency, in which they are not exposed to research ideas and from which they do not gain the tools necessary to follow out research projects. What is really needed to bring the Fellowship program into the same light of other graduate training programs is the placing of definite specifications on their entrance, on their graduation, and providing them with the tools, such as calculus, physics and chemistry of the type and complexity necessary to do modern cardiovascular research.

b. There is at present, in many areas, a neglect on the part of the faculty, of clinical undergraduate teaching. This may well be because of the emphasis on grants and research, and a method must be found of stimulating and supporting clinical undergraduate teachers.

c. If applications to medical schools continue to decrease, subsidies by the federal government must be considered as a means of bolstering the entrance of excellent qualified students into medical education.

d. Post-graduate participation type courses are needed. They should be made available and on a much greater scale than before; they should be standardized, and funds for their support should be made available, — again presumably from the federal government or voluntary interested organizations such as the Heart Association.

e. Teaching has been gradually downgraded and part-time teachers are rapidly disappearing. We should consider as methods of combating this:

1. Career development awards for teachers such as the ones we now have for researchers, and
2. Training grant programs for teachers such as the ones we also now have in research.

f. The gap between what is known and what physicians practice is becoming increasingly great. It was recommended that there be established a National Academy of Medical Sciences which should be used to funnel monies and ideas, to coordinate projects and research ideas, training, education, and community service on a national level.

g. The cardiovascular nurse is now an established need, and it is indeed a great need, and there should be established need training grants in institutions for specifically training individuals in this field.

h. There is an education lag. Students and practicing physicians must be educated to recognize the value of research and of the teachers in cardiovascular research and cardioscular disease.

II. The second large area discussed was COMMUNITY SERVICE. The problem in this area is the application of the new knowledge to the community. There are many un-met needs and the recommendations of this group were as follows:

a. There is a great need for coordinated community planning and a body should be established, a multi-disciplinary group, to implement this sort of community service. This should be done not only at the national level but also at the state and local levels.

b. The multiple discipline approach to cardiovascular disease across the board should be implemented and we should change the teaching of our physicians to enable them to use these paramedical services, such as the hospital, the outpatient department, nursing, social workers, rehabilitation, etc.

c. The general practitioner, the internist and the pediatrician are in short supply in this country. We need more of these family physicians. If they do not become increasingly available, we should consider the use of temporary personnel like the nurses or individuals specifically trained to

handle certain problem circumstances, like the corpsman method that the Navy has used.

d. There should be financial assistance for rehabilitation and convalescent care and also for screening patients with cardiovascular.

e. Educational and vocational rehabilitation should be available for cardiovascular patients.

f. There is a need for increased utilization of psychosomatic therapy in cardiovascular patients.

g. There needs to be improvement in cardiovascular laboratories around the country. There are too many of them and many of them are weak and they should be amalgamated into stronger regional units and perhaps subsidized.

h. A plan should be brought about for the evaluation of local community progress.

i. There is a need for lay and professional education at the community level.

There were also specific recommendations made by each of the functional divisions within the community service area:

1. **Atherosclerosis:** Immediate effort should be made to detect arteriosclerotic patients and field trials should be conducted on a large scale, aimed at reducing atherosclerosis, such as the Framingham study. There should also be labeling of food products as an atherosclerosis hazard. It is also recommended that coronary intensive care units be implemented in regional centers throughout the country. It seems very unfortunate to this group that the tremendous advances made in this field were not being implemented throughout the country.
2. **Congenital heart disease:** There should be preservation, a centralization and a strengthening of cardiovascular centers. There are too many centers and many of them are weak. Standards should be set and there should be regional centers for the difficult cases. Subsidy for these types of centers should be considered. There should also be considerable effort expended into the identification of the etiology of congenital heart disease and emphasis on genetic counseling.
3. **Rheumatic fever:** The preventative program should be strengthened, particularly in the area of adults with heart disease. There should be adolescent clinics established because the adolescent problems are different. There should be emphasis on laboratory identification of the streptococcus. More facilities should be made available for those treating the chronic effects of rheumatic heart disease. Minimum standards should be established in this area and are absolutely mandatory for those who are applying for financial help and are being reviewed in that light.
4. **Cerebral vascular disease:** Emphasis should be placed on rehabilitation and on increasing home care. Rehabilitation centers should be subsidized if necessary.
5. **High blood pressure:** There is a need for (a) referral system to identify areas of care and (b) particularly identifying the



problem in the lack of follow-up in medication and treatment in people with identified hypertension. Emphasis must be on the treatment of the benign and mild hypertension and on thoroughly working-up all patients with hypertensive disease.

6. **Peripheral vascular disease:** Regional referral centers are needed and vocational placement is very weak.
7. **Congestive heart failure:** The important thing in this area is the development of long-term care centers.
8. **Cardiac arrest:** The closed chest massage should be taught to a much greater variety of people, a team for resuscitation should be available in all hospitals which handle any emergency cases and the teaching of nurses should be emphasized.
9. In the area of pulmonary disease there is a need for funds to identify the extent of the pulmonary vascular and pulmonary parenchymal disease problems. More follow-up is needed.

The final summary of this group is that there is a need to continue to try to implement these ideas and to make funds available for following-up with these recommendations. A post conference meeting was held on the afternoon of Tuesday, the 24th, and since there were representatives present from all the State Medical Associations and the U.S. Government it was felt that these reports can be widely circulated and implementation is distinctly possible.

III. The following is the report of the third area of RESEARCH.

a. **Heart muscle and circulation:** Work is needed at the molecular and cellular levels specifically. The mechanical sequence of contraction and the sequence of electrical excitation must be unraveled. The cycle for initiation and control of the heart beat also needs to be elucidated. There is a crying need for new anti-arrhythmic drugs, for new active cardiotonic agents and for investigation into the cause and treatment of cardiac hypertrophy. The role of virus infection in damage to the heart muscle must be elucidated.

b. **Diagnostic methods and specialized therapy:** There is a great need for computers to program electrocardiographic, phonocardiographic and other data which is reducible to numerical terms. Next, there is a need for the development of organ transplants, particularly for the heart and, in the field of renal disease, an implementation of long-term therapy centers and of renal transplants.

c. **Arteriosclerosis:** A method of measuring blood viscosity and its implications is needed. A method of better examining the lymphatics is needed. More investigation into the etiology of arteriosclerosis particularly at the cell level and the role of coagulation and lysis of blood clots is needed. We need more knowledge of the neurohumoral role in the development of arteriosclerosis also, and the psychosomatic role in the etiology. We need to investigate genetic factors and to study families with coronary proneness.

1. **Atherosclerosis — clinical:** We need to de-

velop methods of measuring myocardial performance and we need more knowledge into the role of coagulation and the method of lysing thrombi. We need to investigate thoroughly the effects of anticoagulation.

2. **The peripheral vascular diseases:** There needs to be a method of quantitating peripheral vascular disease and of improving the management of it. An angiographic test which is reliable needs to be developed.
3. **Cerebral vascular disease:** We should learn to study retinal blood flow to get a better idea of diagnosis. Better therapy is also needed in this area and preventive measures should be emphasized.

d. **Shock:** We need to know more about the role of blood vessels in shock and a method of monitoring the activity of peripheral vessels. The selective drugs which operate at the arteriolar level are needed.

e. **Hypertension:** We must be able to get rid of the present side effects of the drugs and develop drugs which act directly on the arteriole. We need to study essential hypertension, the genetic background and the multiple problems which develop from hypertension and atherosclerosis. We need to study siblings, to learn more about the role of the central nervous system in hypertension and to study the associated vascular diseases both their cause and relationship to hypertension.

f. **Rheumatic fever:** The relationship of streptococcus to the effect of producing rheumatic fever should be investigated. Large scale epidemiologic studies should be developed both here and abroad. We are to focus more attention on both acute and subacute bacterial endocarditis and we should attempt to isolate viruses from infectious carditis.

g. **Congenital heart disease:** This area of developmental biology of the heart needs more work and what is also needed is a system of categorization of congenital defects. One of our greatest areas of weakness is newborn babies and there are 25,000 babies born in this country with congenital heart disease. We need to know more about the chromosomal abnormalities versus the development changes as causation of congenital heart disease.

h. **Pulmonary:** We need to identify the role of pollution in the environment, study the filtering and chemical removing properties of the lungs. We need to study more in the area of pulmonary embolization and develop methods for the early detection of patients with emphysema and to simplify the diagnostic techniques and make them available to every physician.

i. **Surgery:** We need a better method of heart bypass. We need to study more thoroughly the effects of hyperbaric oxygenation. We need better heart valves and better grafts especially for small arteries and veins, and we need to develop further the techniques of microsurgery. We need to refine and improve our implantable pacemakers and we need to develop long term methods of external support of the cardiovascular system.

This, then, was a summary of the three areas in the field of cardiovascular disease which were considered in depth at the Second National Conference of Cardiovascular Disease; Education and



Training, Community Service, and Research. The recommendations and changes that were suggested are broadsweeping and it was the feeling of the Conference that all means should be undertaken to further crystalize these needs and to implement the solutions which have been touched upon. There is no question in my mind that the document that comes forth from this Conference will have a great impact not only on medical schools and the training and teaching areas of this country but also on the federal government which is looking for statements from the medical profession regarding the best ways of handling these problems. Whether or not one agrees with all of the conclusions of this Conference, one must realize that these conclusions will be widely quoted or misquoted and used as a basis of argument by many people in pushing their own specific projects.

Respectfully submitted,

RICHARD W. BOOTH, MD,  
Official Representative of the  
Nebraska Medical Assn.

## REPORT ON FIRST NATIONAL CONFERENCE ON HEALTH EDUCATION GOALS

Chicago, Illinois — October 30, 31, 1964

The objectives of this conference were as follows:

To help coordinate health education efforts at the national level and among the states;

To stimulate greater interest and activity in health education at state and local levels; and

To review the role and responsibilities of the individual physician with relation to health education of the public.

### Participants:

Participants were by invitation only. Representatives from the following: Voluntary Health Agencies, Community Health Agencies and Professional Health Agencies.

### Structure of Program:

The first part of the program was devoted to presentations by various authorities to discuss significant factors in health education practice and also to analyze problems involving health education communication and interpersonal relations.

The second part was devoted to a discussion of health education goals by the participants. The participants were divided into five discussion groups and were given opportunity to discuss health education goals and ways and means to achieve them.

The more significant problems discussed were as follows:

1. The problem of communication between professional and community health agencies.
2. The health educational program in schools and colleges not coordinated to present day health needs.
3. The problem of developing a procedure or mechanism by which various disciplines within a community can work together on community health problems in a setting in which the professional ethics of the various disciplines

are observed and individual rights are respected.

## Recommendations for the Nebraska State Medical Association:

1. Recommend that community health education be assigned to the Health Education Committee.

In order to promote a coordinated health education program in schools, colleges, and communities, it is important that one committee be assigned to the over-all function of health education and that this committee establish subcommittees to work in health education in specialized areas.

2. Recommend that the Health Education Committee be assigned the problem of developing a mechanism or procedure by which professional agencies and voluntary agencies can work together constructively and able to communicate effectively in working on common community health problems.

Respectfully submitted,

SAMUEL I. FUENNING, MD,  
Representative of the Nebraska  
State Medical Association.

## REPORT OF ALLIED PROFESSIONS COMMITTEE

Lloyd R. Wagner, M.D., Hastings, Chairman; Harry McFadden, Jr., M.D., Omaha; Otis W. Miller, M.D., Ord; Walter Reiner, M.D., Holdrege; R. Pitsch, M.D., Seward; A. L. Smith, Jr., M.D., Lincoln.

During the calendar year 1964, the Allied Professions Committee held one meeting that on April 1, 1964. During the year, the committee continued its activities in several areas in which it had been previously committed. No new matters were referred to this committee during the year.

A proposal presented first at the Mid-winter meeting of the House of Delegates regarding pharmacists working as laboratory technicians was considered by this committee. The committee considered the proposal, and elected not to endorse it. This action was concurred in by the House of Delegates at the annual meeting.

Liaison was continued with the professional nursing groups in the State of Nebraska concerning refresher courses for registered nurses. A resolution was introduced at the annual meeting, expressing support of this concept by the Nebraska State Medical Association. This resolution was approved by the House of Delegates, but no further action has been taken, inasmuch as there has been no request for further support.

Discussion was held at the House of Delegates meeting concerning the medicine and pharmacy problem in the State of Nebraska. Much of this discussion was informational in nature. However, as a result, several difficult problems of a local nature in the state have been resolved by the officers of the society.

Members of this committee continued representation of the State Medical Association in the Inter-professional Council. No problems of major concern to any of the professions involved in the Council have been considered. However, the other professional representation in the Council sup-

ports in general the positions of the State Medical Association. Membership in this organization should be continued.

Respectfully submitted,

LOYD R. WAGNER, MD,  
Chairman.

## REPORT OF BLOOD AND BLOOD PRODUCTS COMMITTEE

H. W. McFadden, Jr., M.D., Omaha, Chairman; Pierce Sloss, M.D., Grand Island; George J. Millett, M.D., Fremont; Theodore Perrin, M.D., Omaha; Morton Kulesh, M.D., Omaha; Harlan Papenfuss, M.D., Lincoln.

During the past reporting year the Committee on Blood and Blood Products has received no specific official problems for its consideration. Individual members of the committee, however, have been contacted and these discussions have led to the following report of your Committee.

The program of the previous committee on Blood and Blood Products has been continued in the sense that the effort of members of the Nebraska Association of Pathologists to provide educational opportunity for laboratory technologists in the field of blood processing and compatibility testing has been encouraged. In this area of endeavor, Doctor Morton Kulesh, Omaha, presented a work-shop on processing of blood and compatibility testing of blood destined for transfusion to a combined meeting of the organized groups of medical technologists of Nebraska and Iowa during September of 1964. This meeting was held in Omaha. Similarly, Doctor Loyd Wagner of Hastings conducted a workshop dealing with this same general subject of blood processing and compatibility testing in Hastings during the past year. Doctor J. X. Tamisiea, Omaha, will conduct an educational session in Scottsbluff, Nebraska, on February 6, 1965, which has as its title, "Minimal Standards in Blood Banking." This particular program is designed for medical technologists and is promoted under the auspices of the technology group and the Nebraska Association of Pathologists. In the opinion of the Committee, these efforts are to be highly commended and encouraged.

As a result of previous studies undertaken by the Committee on Blood and Blood Products and the experience of various members of the Nebraska Association of Pathologists as concerns the problem of blood processing and compatibility testing, particularly as this exists in smaller communities and smaller hospitals, the Committee is of the opinion that a study should be conducted on the status of blood procurement, blood processing, and compatibility testing in the State of Nebraska. The present committee recommends such a study to the succeeding Committee on Blood and Blood Products.

One of the more difficult problems to be solved is the proper procurement and replacement of blood and blood products. Such procurement and replacement can only be successful if every practicing physician makes a special point to encourage the friends and relatives of persons receiving blood to replace the blood used. Financial or other remuneration intended for the replacement of blood is no substitute for the actual needed substance itself. The Committee encourages every physician of the state to foster proper replacement of blood by

encouraging relatives and friends of persons receiving blood or blood products to make proper restitution.

On December 11 and 12, 1964, the Department of Environmental Health of the Division of Environmental Medicine and Medical Services of the American Medical Association sponsored a Conference on Blood and Blood Banking in Chicago. The program titles of this seminar are as follows:

Objectives and Activities of AMA Committee on Blood

History of Blood Banking in the United States

Blood Banking Concepts and Systems

Automation

Central Typing and Crossmatching

Medical Sponsorship and Supervision

The Knoxville Program

Hospital Programs

International Aspects of Blood Banking

Blood Procurement Concepts and Economics

Volunteer Donor Programs

Paid Donor Programs

National Clearinghouse Program

Blood Banking Economics

Blood Insurance — Assurance Plans

Blood Insurance Plans

Blood Assurance Plans

Standards, Inspection, Accreditation

State Laws and Regulations

Serum Hepatitis Single Unit Transfusions

Blood Research Highlights

Medical Responsibility and Leadership in Blood Banking Affairs

Loyd R. Wagner, MD, Pathologist of Hastings, Nebraska, attended this meeting as the official representative of the Committee and the Nebraska State Medical Association. Doctor Wagner's report to the Committee includes the following important items:

1. The general purpose of this meeting appeared to be to bring together representatives of the major forms of blood bank institutions in the United States. Included, either on the program or in attendance, were representatives of the American National Red Cross, the American Association of Blood Banks, various private non-profit blood banks sponsored by medical societies, and representatives of commercial blood banking facilities.
2. Doctor Wagner indicates that the consensus of the panel speakers, as well as the audience, favored the concept that blood banking should be organized on a non-profit basis and should entail personal as well as community responsibility. In all instances it was stressed that cooperation with and by the local medical society and individual physicians was essential to the proper procurement and replacement of blood. The importance of the individual voluntary replacement program was stressed and believed to be of prime importance.
3. The implications of the Federal Trade Commission ruling in the Kansas City case were discussed at length. Apparently, only the commercial blood bank operators favored this



ruling. The general consensus appeared to be that blood should not be classed as a commodity, but rather as a patient service.

4. The implication of this ruling as regards other tissue donations and transplants was discussed. It was pointed out that blood is a transplantation of living tissue and, therefore, some of the precedents which are established in blood banking would, of necessity in the future, apply to other tissue banks and tissue donations.
5. Doctor Wagner's report summarized by indicating that it appeared there was agreement that provision of blood should be a medical service and responsibility, and should not be considered as a commodity in interstate commerce. Leadership and cooperation of local medical society groups is of paramount importance in the operation of any successful blood bank program.

The individual members of the Committee on Blood and Blood Products have considered some of the implications of the ruling of the Federal Trade Commission in the Kansas City case, and find themselves in direct opposition to this ruling. The Committee recommends that all interested physicians become informed on the general subject of blood procurement and blood processing.

The Committee has the following recommendations for the Board of Councilors and the House of Delegates of the Nebraska State Medical Association:

1. The Committee on Blood and Blood Products undertake a study of blood procurement, blood processing, and compatibility testing in the State of Nebraska.
2. The Committee recommends the adoption of the following resolution which, in general, follows the pattern of a resolution adopted by the House of Delegates of the American Medical Association in December, 1963, at Portland, Oregon.

#### RESOLUTION

WHEREAS, H.R. 8426 of the 88th Congress of the United States would provide that a refusal of non-profit blood banks and of physicians to obtain blood and blood plasma from other blood banks shall not be deemed to be acts in restraint of trade under the laws of the United States; and

WHEREAS, Non-profit blood banks by producing blood and blood plasma from volunteer donors and scientifically processing such materials for human use, provide an essential part of medical care in the United States; and

WHEREAS, Physicians who are skilled in clinical pathology and hematology voluntarily and without compensation work in and direct the technical operation of such non-profit blood banks; and

WHEREAS, These physicians are usually members of their county, state and national medical associations and their respective specialty societies; therefore be it

RESOLVED, By the House of Delegates of the Nebraska State Medical Association that

it favors enactment of legislation by the Congress of the United States, for the intent and purpose for which H.R. 8426 provides; and be it further

RESOLVED, That, at the appropriate time, the position of the Nebraska State Medical Association on H.R. 8426, 88th Congress, or similar bills, be made known to proper representatives of the American Medical Association and to appropriate members of the Congress and to other interested parties.

Respectfully submitted,

H. W. McFADDEN, JR., MD,  
Chairman.

#### REPORT OF CIVIL DEFENSE AND DISASTER COMMITTEE

George N. Johnson, M.D., Omaha, Chairman; Joe T. Hanna, M.D., Scottsbluff; D. W. Kingsley, M.D., Hastings; H. Dey Myers, M.D., Schuyler; John G. Wiedman, M.D., Lincoln; I. M. French, M.D., Wahoo.

The following is a summary of the Civil Defense and Disaster Committee of the Nebraska State Medical Association for 1964:

The Civil Defense and Disaster Committee met at the Hotel Cornhusker, April 2, 1964.

Present were Doctors George N. Johnson, Chairman, Omaha; Isaiah Lukens, Tekamah; H. Dey Myers, Schuyler; R. F. Sievers, President, Blair; R. E. Garlinghouse, President-elect, Lincoln; Horace V. Munger, Secretary-Treasurer, Lincoln; Ivan French, Wahoo; Russell C. Brauer, Lincoln; H. F. Elias, Beatrice; R. C. Rosenlof, Kearney; M. D. Mathews, St. Paul; E. A. Rogers, Lincoln; and Kenneth Neff, Executive Secretary, and Bill Schellpeper, Executive Assistant. Guests present were Major General Lyle A. Welch, Lincoln; Mr. Harold McGrew, Lincoln; Miss Doris Dovall, Lincoln; Miss Betty Wiley, Omaha; Mr. Eldon Miller, Lincoln; Mr. Larry Smith, Lincoln, and Mr. Milton Parker, Lincoln.

Following dinner Dr. Johnson welcomed those attending the meeting. He introduced Major General Welch and invited him to make any comments he might have regarding the Civil Defense Program of Nebraska.

General Welch stated that he was pleased to be at the meeting and reviewed the past progress of the program and explained some of the future needs to be met. He mentioned that Dr. Rogers needs a larger budget to retain the services of the Disaster Planning Personnel. He also mentioned that the shelter program is progressing well, although the program as might be expected is lagging in some communities.

Mr. Milton Parker stated that the 16 emergency hospitals in the state have been receiving more supplies to make them better equipped for longer periods of operation. Training exercises have been working well and have been quite regular. The hospitals were inspected last year and deficiency problems are being corrected. There is a need for more community support of the hospitals, because many people aren't aware the facilities even exist. Doctor participation has been good in connection with all hospitals. More sup-



port is needed for setting up and taking down the hospitals. Nebraska will not receive more hospitals as present appropriations show the state to be fairly well covered in comparison to other areas.

Dr. Rogers stated that much more could be accomplished with more ample funds and consequently more personnel. The Budget Committee of the Legislature gave no funds for Health Mobilization, although some funds were received from the Public Health Service. The Federal Government has cut funds available to Nebraska currently and because of this programs will have to be dropped.

Dr. Rosenlof explained currently operating plans in Kearney in connection with the Tuberculosis Hospital. The public has given better than average support. Much publicity was carried out in newspapers and over the radio, but even so many people said they were not aware of the program. He felt that persons connected with local government were the people to try and persuade to play an active part in the program.

Dr. Brauer stated that more people should be given a chance to tour the hospitals when they are set up, and having them set up during meetings of allied medical groups was very rewarding. The medical group has been active in informing the medical profession of possible problems that would be involved if an emergency should arise. More establishments have emergency equipment which would be of great value in time of emergency. General feeling is that doctors must be more informed and consequently exercises held twice yearly.

General Welch stated that the emergency hospitals must be taken apart and then set up and taken down over and over again for practice. The problem seems not to be with the medical personnel but with the lay personnel needed to construct and maintain the facility while in operation.

Dr. Mathews stated that St. Paul has had no practice exercises and he was afraid that the Grand Island physicians who would have to man the hospital were not aware of the facilities and responsibilities involved. Mentioned that it was hard to get rural people to come to meetings, although the local fire department is quite interested and has been very helpful.

Dr. French stated that some of the people from Wahoo have been in other communities and observed exercises, but none have been held locally. He felt that the support of the Lincoln and Omaha doctors was needed. Also mentioned that a demonstration locally was needed.

Dr. Sievers stated that an exercise has been held in Blair in which the Mayor of the city had the city employees set up the hospital. The program went real well although few people came to observe considering the publicity that was sent out. The Medical Self-Help Course that was recently completed was very well received and very few absences were recorded.

Dr. Myers stated that an exercise was held last fall and was quite successful, and should be done every year. There is also a S.A.C. Emergency Hospital stored in Schuyler, although it is completely run by their own personnel and is to be used for Air Force personnel. Was a distinct need for

more lay personnel to help set up and take down the hospital.

Dr. Elias stated that in Gage County an attempt is being made to better educate the lay public concerning the program. A problem existed in that set up and take down personnel were at a minimum. Good liaison exists with city officials and consequently disaster plans have been made in the local hospitals. Talks have been presented on mass-casualty management and the "buddy system" has been instigated. The Emergency Hospital is being stored at the State Home and would probably be set up there.

Miss Wiley stated that the nurses had a 2-day workshop last May on Medical Self-Help which was quite successful. The attending nurses then went back to their respective communities and taught such courses locally. Some schools of nursing in the state are giving this type of program to their students. Dr. Johnson complimented the nurses on the program they have carried out in this Self-Help Program.

Mr. Smith stated that the Pharmacists have surveyed the state in regard to the availability of narcotics in case of emergency. The group has also been concerned with keeping the drugs included in the hospitals up-dated. He stated that the Pharmacy Association is very much interested in aiding the program and will do all possible.

Miss Dovall stated that the Medical Technicians have been active in drills when they were personally or individually connected with a particular drill or exercise. The association as such has no district Civil Defense Program. She felt the Technicians should be connected closely with the program because of the extensive laboratories included in the emergency hospitals.

The general feeling of all in attendance was that all groups must work together in order for any Civil Defense Disaster Plan to function with any great advantage. It was mentioned that numerous films are available for showing and publicizing the emergency hospitals, and the groups represented were in agreement that a greater degree of showing would be quite beneficial.

Discussion followed on setting up a display hospital at the State Fair. Such a plan will be checked into and necessary plans made.

Dr. Sievers stated that he was pleased with the good attendance at the meeting and he mentioned that the Association will take an active part in aiding Dr. Rogers in getting more funds for his Department. Dr. Garlinghouse agreed and stated that the aid of Allied Medical Groups is also important in this endeavor.

Dr. Johnson asked for an up-to-date report from each Director as to the current facilities and current situation of each Emergency Hospital. The Association will contact the Directors asking for this information. The meeting was adjourned.

The following is in conjunction with the Health Mobilization Program of the State Health Department for 1964. This report is from Milton S. Parker, Director and Dr. E. A. Rogers:

During the past year, emphasis of this program has been mainly in the following areas:

**Packaged Disaster Hospitals** — This title represents what was formerly called "Civil Defense Emergency Hospitals" and the change was made by the Public Health Service in 1964 in order to convey the concept that these also be used for critical natural disaster situations where life and health may be endangered.

In addition to the 16 hospitals formerly repositioned in Nebraska, arrangements were made for the location of a new unit in Omaha, Lincoln and O'Neill. Applications for these have been made to the Federal Government and it is expected that they will be provided within a few months. The Lincoln Unit is due to arrive on March 5th. Dates of Omaha and O'Neill not yet received.

The following shows the location of emergency hospitals stored in Nebraska (including the three due to be received soon) and also the medical directors of each: Alternate medical directors are being appointed for each hospital:

Beatrice—H. F. Elias, MD; Blair—L. I. Grace, MD; Broken Bow—T. H. Koefoot, Jr., MD; Fremont—Robert M. Sorensen, MD; Grand Island—Robert R. Koefoot, MD; Hastings—Robert C. Smith, MD; Kearney—Robert C. Rosenlof, MD; Lincoln—Russell C. Brauer, MD; Norfolk—James H. Dunlap, MD; North Platte—Max M. Raines, MD; Omaha—R. Russell Best, MD; O'Neill—R. W. Waters, Jr., MD; Schuyler—H. Dey Myers, MD; Scottsbluff—J. P. Heinke, MD; St. Paul—M. D. Mathews, MD; Superior—C. T. Mason, MD; Wahoo—I. M. French, MD; West Point—L. L. Ericson, MD; and York—James D. Bell, MD.

Training exercises for the emergency hospitals were conducted in Kearney, Beatrice, Fremont and Hastings. For the most part, these were one-day exercises designed to orient and familiarize medical, allied and supporting personnel with emergency equipment and the principles of handling mass casualties.

All 16 of the communities where disaster hospitals are located have arranged for and received the first two of a series of supply additions being furnished to raise their operating capability from 3 to 30 days.

**Medical Self-Help** — With the cooperation of the State Medical Association, Civil Defense Agency and Department of Education, the number of persons in Nebraska trained in Medical Self-Help reached 3,946 at the end of last year.

**Natural Disasters** — In the June, 1964, floods, previous planning by the State Health Department, State Civil Defense Agency and other organizations was tested to some extent. One matter that has become evident insofar as local preparedness in emergency health services is concerned is the need for a medical director; whether he were designated on a county, area or other basis would not matter as long as there is a physician who can coordinate the health and medical requirements in that community in an emergency or provide them with information and reassurance when services such as immunization are not in order. Also at the present time, it is not possible for the State Health Director to procure immediate authentic information from a locality when a disaster occurs.

In December, 1964, the groundwork was laid

for a two-day Stateline Course to be held in Nebraska in 1965 for the purpose of covering the main facets of emergency preparedness for health and medical care in national or natural disasters. At that time, Dr. Rogers called a meeting with representatives from the Medical and Allied Profession, MEND Program, Civil Defense and the Public Health Service in order to discuss this subject, at which time the decision was made for this course to be held in May, 1965.

Respectfully submitted,

GEORGE N. JOHNSON, MD,  
Chairman.

## REPORT OF DIABETES COMMITTEE

Morris Margolin, M.D., Omaha, Chairman; Wm. J. Reedy, M.D., Omaha; Loren Imes, M.D., Grand Island; Wm. B. Long, M.D., Lexington; Willard G. Seng, M.D., Oshkosh; Jon T. Williams, M.D., Lincoln.

Your committee respectfully presents the following report for the year 1964 in the field of Diabetes Detection and Education.

1. State Fair at Lincoln, Nebraska, using Dextrostix blood sugar tests under supervision of Dr. J. W. Hervert and Dr. J. W. Bengston.

|                    |            |    |
|--------------------|------------|----|
| Number tested      | -----1,411 |    |
| Number positives   | -----      | 47 |
| Number positives,  |            |    |
| previously unknown | -----      | 25 |

2. National Diabetes Week. Detection reported to the State headquarters. Urine testing program by our members, 164 reports submitted.

|                    |            |     |
|--------------------|------------|-----|
| Number tested      | -----9,710 |     |
| Number positives   | -----      | 260 |
| Number positives,  |            |     |
| previously unknown | -----      | 60  |

3. Frontier County Health Council by means of Clinistix.

|                     |           |     |
|---------------------|-----------|-----|
| Number tested       | -----932  |     |
| Number positives    | -----     | 2   |
| Number positives,   |           |     |
| previously unknown  | -----     | 0   |
| TOTAL Number Tested | ---10,526 |     |
| TOTAL Positives     | -----     | 301 |
| TOTAL Positives,    |           |     |
| Previously Unknown  | ---       | 80  |

## COMMENTS:

A supply of Clinistix was supplied by the Nebraska Diabetes Association to an organization in David City and Chadron College in addition to those sent to the Frontier Health Council. We have received no reports from the former two as yet, although we have communicated with them to that effect. Should these reports come in we will forward them to you.

On the whole this is a comparatively poor showing in relation to previous years. The chief failure seems to be in the number of physician members of the State Medical Society who failed to run the tests or report them.

Respectfully submitted,

MORRIS MARGOLIN, MD,  
Chairman.



## REPORT OF HEALTH EDUCATION IN SCHOOLS AND COLLEGES COMMITTEE

Robert Morgan, M.D., Alliance, Chairman; Warren Bosley, M.D., Grand Island; S. I. Fuenning, M.D., Lincoln; H. V. Smith, M.D., Kearney; H. W. Shreck, M.D., Hastings; Paul Bancroft, M.D., Lincoln.

The Committee has continued to work on the evaluation of health education in Class III high schools as outlined in the report a year ago. At present, criteria forms have been distributed to the schools through doctors who are residents of the areas involved. Since all of the forms have not been returned to us, no tabulations have been made. A full report will await the time that the forms can be assembled and the results tabulated and evaluated.

The Sub-Committee on Athletic Injuries has been active this year as the attached report will show. I would like to commend this sub-committee for a job well done in its sponsorship of the Second Annual Seminar on "The Medical Aspects of Competitive Athletics." The committee has also developed a chart for pre-season evaluation of high school athletes as well as a medical record and physical examination form. This is all explained in the Sub-Committee's report which I have requested be made a part of this report.

I recommend that the Council and House of Delegates adopt the proposals made by the Sub-Committee report.

Respectfully submitted,

ROBERT J. MORGAN, MD,  
Chairman.

## REPORT OF SUB-COMMITTEE ON ATHLETIC INJURIES

Horace W. Shreck, M.D., Chairman; John Yost, M.D.; Bruce Claussen, M.D.; S. I. Fuenning, M.D.; Paul Goetowski, M.D.; Robert Gillespie, M.D.; George Sullivan, RPT.

The Sub-Committee highlighted the year 1964 by sponsoring the Second Annual Seminar on "The Medical Aspects of Competitive Athletics." This was held in Lincoln, Nebraska, August 21 and 22. The attendance numbered some over seventy. It was attended by physicians, dentists, physiotherapists, and a few coaches. While we were happy to have the number we did, it is felt that this year we should expect at least double the attendance of last year because of the interest shown. The Sub-Committee was ably assisted in this venture financially, with materials, and with manpower by the following:

Nebraska School Activities Association  
Nebraska State Medical Association  
American College of Surgeons—Nebraska  
Chapter  
Nebraska Dental Association  
Academy of General Practitioners  
University of Nebraska Health Services  
Division of Athletic Medicine  
Johnson and Johnson

The program was well received and we have had very favorable comments on the program content. It is felt by the Sub-Committee that this type of program or seminar should be held yearly as long as worth while material can be had to pass along

to examining and treating physicians who handle our high school athletes. We feel that this is a big step in the upgrading of care for our Nebraska athletes.

In our meetings during the year the Sub-Committee developed a chart to be used as "Guidelines for Physicians on the Pre-Season Medical Evaluation for High School Athletes." This was established on the basis of Contact and Non-contact Sports. The form presented is self explanatory, listing causes for disqualification in each of the categories of sport.

The Sub-Committee on Athletic Injuries wishes to submit this proposal of Guidelines to the Councilors for their acceptance and recommendation. We then wish to present it to the House of Delegates for their adoption as recommended Guidelines to all physicians of the State of Nebraska who examine and treat high school athletes. If adopted, we would further recommend that the Nebraska State Association send a copy to every physician in the state with a cover letter from the State President urging its use.

The Sub-Committee wishes to present a second proposal. This is a Medical Record and Physical Examination Form, which we feel is the proper type to be used for our Nebraska high school athlete.

Such a form would be started on the athlete at the start of his participation in sports; in junior high, in the ninth grade, or whenever he wanted to enter the athletic program. The medical record would be completed, he would then get his physical examination and the form would be filed when completed in the superintendent's office, or in the athletic director's office as the case might be.

Illnesses or injuries of consequence would be recorded on the record, any sequelae or permanent defects noted. Then one has a complete and up-to-date record of the youngster through his athletic career in the secondary school. At the beginning of each year the examining physician, for the school, can glance through each boy's record and note any problems he should be watching for.

If the athlete is a good one, and he goes on to the university, or any college, such a record would be of considerable value to the school he enters and to their examining physician.

The Sub-Committee on Athletic injuries presents this medical record and physical examination form to the councilors for their acceptance and recommendation.

We then wish to present it to the House of Delegates for adoption as the type of medical record and physical examination form the Sub-Committee on Athletic Injuries would recommend to the physicians of the State of Nebraska as the best approach to a full and complete effort to give our Nebraska high school athletes protection from injuries.

If adopted, we would further recommend that the Nebraska State Association send a copy of the medical record and Physical Examination form to every physician in the state urging the use of this on a similar detailed type form.

We would then ask that the House of Delegates, through the president of the Nebraska State Medical Association, send a copy of the two adopted



resolutions to the secretary of the Nebraska School Activities Association to be presented to their board for their information.

Respectfully submitted,

HORACE W. SHRECK, MD,  
Chairman.

#### GUIDELINES FOR PHYSICIANS ON PRE-SEASON EVALUATION FOR HIGH SCHOOL ATHLETES

##### Contact Sports:

Football  
Wrestling  
Boxing  
Basketball  
Baseball  
Soccer  
LaCrosse  
Volley Ball  
Hockey  
Water Polo  
Etc.

##### Non-Contact Sports:

Swimming  
Track  
Golf  
Tennis  
Fencing  
Rowing  
Skiing  
Etc.

#### DISQUALIFYING CONDITIONS FOR PARTICIPATION IN A CONTACT SPORT

1. HEAD:
  - a. Uncontrolled epilepsy.
  - b. Recurrent cerebral concussion, three episodes.
  - c. Gross emotional instability such as manifest psychosocial behavior disorder, sexual deviate, etc.
2. EYE:
  - a. Retinal detachment.
  - b. One eye missing.
  - c. Any active eye infection.
3. LUNG:
  - a. Severe bronchial asthma, recurrent type.
  - b. Arrested tuberculosis.
  - c. Any active lung infection.
4. PANCREAS:
  - a. Unstable diabetic.
5. ABDOMEN:
  - a. Inguinal hernia.
  - b. Undescended testes over the pubic ramus.
  - c. Any palpable major intra-abdominal organ (spleen, liver, kidney).

6. CARDIO-VASCULAR SYSTEM:
  - a. Organic heart disease.
  - b. Essential hypertension.
  - c. Any history of blood coagulation deficiency.
7. GENITO-URINARY SYSTEM:
  - a. Diseased kidney.
  - b. One kidney missing.
  - c. One testicle missing.
8. MUSULOSKELETAL SYSTEM:
  - a. Navicular fracture with gross limitation of motion.
  - b. Recurrent dislocation of the shoulder.
  - c. Spondylolisthesis and spondylolysis.
  - d. Gross instability of both knees.
  - e. Active Osgood-Schlatter's disease.
  - f. Tendency for Myositis Ossificans associated with blood coagulation deficiency (Factor VII).
  - g. Cervical vertebrae fixation.
  - h. Deformities of hips (Leg Perthes).
  - i. Active epiphysitis of spine (Sherman's disease).
  - j. Lack of full function of motion of a weight bearing joint.
  - k. Lack of full extension of elbow in basketball player.
  - l. Atrophy of a weight bearing extremity.
9. LOSS OF ANY UNPAIRED ORGAN
10. PHYSICALLY IMMATURE INDIVIDUAL
11. SKIN:
  - a. Recurrent staph infection (furuncles).
  - b. Active severe ringworm and other fungus infections.

#### DISQUALIFYING CONDITIONS FOR PARTICIPATION IN NON- CONTACT SPORTS

1. HEAD:
  - a. Uncontrolled epilepsy.
  - b. Organic psychiatric disease.
2. EYE:
  - a. Retinal detachment.
  - b. Active eye infection.
3. LUNG:
  - a. Severe bronchial asthma, recurrent, and other active lung infection.
4. PANCREAS:
  - a. Unstable diabetic.
5. CARDIO-VASCULAR SYSTEM:
  - a. Organic heart disease.
  - b. Essential hypertension.
6. GENITO-URINARY SYSTEM:
  - a. Diseased kidney.

- a. Recurrent dislocation of the shoulder in swimming.
- b. Gross instability of knees.
- c. Any active osteo-chondrosis.

- a. Recurrent staph infection.
- b. Active severe ringworm.

- Any palpable major intra-abdominal organ.
- Symptomatic hernia.

-----  
(Name)

(Home Address)

(Age)

(Date of Examination)

(Nearest Relative)

(Address)

-----  
(Telephone)

(Family Physician)

(Address)

(This Side Must Be Completed by Parent or Guardian Before  
A Physical Examination Will Be Given)

|    |                      |       |
|----|----------------------|-------|
| a. | St. Vitus Dance      | _____ |
| b. | Tonsillitis          | _____ |
| c. | Pneumonia            | _____ |
| d. | Scarlet Fever        | _____ |
| e. | Epilepsy             | _____ |
| f. | High Blood Pressure  | _____ |
| g. | Kidney Disease       | _____ |
| h. | Small Pox            | _____ |
| i. | Rheumatism           | _____ |
| j. | Malaria              | _____ |
| k. | Bleeder              | _____ |
| l. | Bruise Easily        | _____ |
| m. | Mumps                | _____ |
| n. | Influenza            | _____ |
| o. | Poliomyelitis        | _____ |
| p. | Tuberculosis         | _____ |
| q. | Legg-Perthes         | _____ |
| r. | Osgood Schlatter's   | _____ |
| s. | Recurrent Boils      | _____ |
| t. | Hernia               | _____ |
| u. | Tetanus—Year Booster | _____ |
|    | Other Diseases       | _____ |

3. PREVIOUS INJURIES: (sprains, strains, fractures, torn muscles, ligament injuries, dislocations). If yes, check below, and describe:

1. Fracture
2. "Knock Outs" or concussions
3. Face Injury
  - a. eye
  - b. ear
  - c. nose

1. Neck
2. Lower Back

d. UPPER ARM

f. FOREARM

## h. HAND

## i. HIP

k. UPPER LEG

### 1. KNEE

## m. LOWER LEG

## n. ANKLE

## 0. FOOT

p. CHEST AND RIBS

q. ABDOMINAL (Stomach)

4. REMARKS: \_\_\_\_\_

DOCTORS, PLEASE NOTE: If findings negative, mark "OK" and year. If findings positive, name and year.

**PHYSICAL EXAMINATION:**

|        | 19__  | 19__  | 19__  | 19__  | 19__  |
|--------|-------|-------|-------|-------|-------|
| Weight | _____ | _____ | _____ | _____ | _____ |
| Height | _____ | _____ | _____ | _____ | _____ |
| Eyes   | 19__  | 19__  | 19__  | 19__  | 19__  |
| OS     | _____ | _____ | _____ | _____ | _____ |
| OD     | _____ | _____ | _____ | _____ | _____ |

|       | 19__  | 19__  | 19__  | 19__  | 19__  |
|-------|-------|-------|-------|-------|-------|
| Ears  | _____ | _____ | _____ | _____ | _____ |
| Right | _____ | _____ | _____ | _____ | _____ |
| Left  | _____ | _____ | _____ | _____ | _____ |
| Nose  | _____ | _____ | _____ | _____ | _____ |

b. NECK \_\_\_\_\_

## c. THORAX (deformity) -----

## 1. HEART

a. Pulse

## a. Pulse

b. Blood Pressure

### c. Auscultation

## 2. LUNGS -----

d. ABDOMEN (scars, masses, hernia, etc.)

- e. GENITALIA -----
- f. RECTUM (pilonidal cysts, hemorrhoids, etc.) -----
- g. SPINE (posture, gait, motion, tenderness) -----
- h. UPPER EXTREMITIES (range of motion, alignment, atrophy, scars) -----
- i. LOWER EXTREMITIES (range of motion, alignment, atrophy, scars) -----

#### NEUROLOGICAL SCREENING

|         | BJ    | TJ    | KJ    | KJ    | Finger-Nose | Babinski |
|---------|-------|-------|-------|-------|-------------|----------|
| 1. Rt.  |       |       |       |       |             |          |
| 2. Lt.  |       |       |       |       |             |          |
| URINE:  | 19__  | 19__  | 19__  | 19__  | 19__        |          |
| Color   | ----- | ----- | ----- | ----- | -----       |          |
| Sp. Gr. | ----- | ----- | ----- | ----- | -----       |          |
| Sugar   | ----- | ----- | ----- | ----- | -----       |          |
| Albumin | ----- | ----- | ----- | ----- | -----       |          |
| Micro   | ----- | ----- | ----- | ----- | -----       |          |

#### TETANUS RECORD

|         | 19__  | 19__  | 19__  | 19__  | 19__  |
|---------|-------|-------|-------|-------|-------|
| Tetanus | ----- | ----- | ----- | ----- | ----- |
| Toxoid  | ----- | ----- | ----- | ----- | ----- |

REMARKS: -----

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#### REPORT OF INSURANCE COMMITTEE

Paul J. Maxwell, M.D., Lincoln, Chairman; Dwaine Peetz, M.D., Neligh; Edmond M. Walsh, M.D., Omaha; James Dunlap, M.D., Norfolk; Frank Cole, M.D., Lincoln; James Thayer, M.D., Sidney.

The Insurance Committee had two meetings in 1964 occurring on January 15th and on March 11th with Dr. Edmond M. Welsh as Chairman.

Both of these meetings were concerned with proposed retirement programs for members of the Nebraska State Medical Association.

On January 15th Mr. Alfred J. Hoffman presented the Jones Plan which is currently being used by the American Academy of General Practice. Mr. J. Merle Lemley presented the features of the Meridian Fund, Inc.

After listening to the discussants, it became apparent that the Insurance Committee needed advice from uninterested individuals who were well versed in the Keogh Plan and in retirement programs in general.

Accordingly in the March 11, 1964 meeting, Mr. Vincent Goeres and Mr. Robert Hine representing the National Bank of Commerce of Lincoln, Nebraska met with our committee to discuss the situation further.

It was Mr. Goere's opinion that if a physician

wanted to enter a Keogh Plan at this time that he should join the AMA program which he felt was at present by far the best. Mr. Goeres went on to say that it would probably be wise for the Nebraska State Association to wait for one or two years because it was felt that the Keogh Bill would probably improve and provide greater latitude for the physician.

After further discussion, it was felt that with the information available the Insurance Committee did not feel that it could endorse a Keogh or Non-Keogh Plan at this time.

Respectfully submitted,

PAUL J. MAXWELL, MD,  
Chairman.

#### REPORT OF JOINT COMMITTEE FOR THE IMPROVEMENT OF THE CARE OF THE PATIENT

W. C. Kenner, M.D., Nebraska City, Chairman; M. P. Broolsma, M.D., Lincoln.

There were several joint meetings with representatives of the Nebraska Hospital Association and the Nebraska Blue Cross and Blue Shield as well as doctors representing various hospital staffs.

The subject discussed was chiefly the formation of Utilization Committees for study of length of hospitalization for various types of admissions. This is a very important study, for only by conscientious study of the problem can we understand the problem of the insurance companies who are our only hope of stemming the tide of the complete socialization of medicine.

Now our own committees are made up of doctors of the staff of our own hospital making a study for information and education only. If Medicare is enacted, we will find a Utilization Committee being made compulsory and will be made up of a minority of doctors and a majority of laymen who will determine the proper length of hospitalization.

One very interesting meeting was a discussion of the P.A.S. system of automated hospital records. This allows a very detailed study of hospital care — classified in detail for types of diseases or operations, laboratory procedures, length of stay, or any aspect of the care of the patient one wishes to study.

It is all done on the impersonal basis and is an amazing method of accurate study of patient care. Dr. Robert C. Rosenlof of Kearney presented the results of the study made at their hospital and it was very intriguing.

I would highly recommend the study of this method of computer-based medical records information systems. This is called P.A.S. — the Professional Activity Study, and M.A.P. — the Medical Audit Program.

Respectfully submitted,

W. C. KENNER, MD,  
Chairman.



## REPORT OF MATERNAL AND CHILD HEALTH COMMITTEE

Warren G. Bosley, M.D., Grand Island, Chairman; Hodsen Hansen, M.D., Lincoln; Ted Koefoot, M.D., Broken Bow; Robert McIntire, M.D., Hastings; Otto Rath, M.D., Omaha; Theo. J. Lemke, M.D., Columbus; Wm. Rumbolz, M.D., Omaha; Harold S. Morgan, M.D., Lincoln.

The Maternal and Child Health Committee held two meetings during 1964. The first meeting was held on January 9th.

Dr. Bosley discussed the new reporting forms for reporting maternal deaths. He also read the letter which he sends to each physician along with the reporting form. He further reported that six cases had been received in 1963, and suggested that several cases a year might be written up in the Journal.

The committee discussed methods of obtaining information on deaths and it was suggested that all women of child bearing age who die be checked into to see if they were pregnant at any time up to ninety days prior to death. It was also suggested that this added question might be placed on the death certificate. Dr. Bosley will check with the MCH Division of the Health Department on this matter.

Dr. Bosley reported on an MCH meeting held in West Virginia under sponsorship of the AMA, which he attended. He indicated that the Children's Bureau in Washington had promoted a model law on the battered child syndrome which they felt all states should enact. There was general feeling that the model law was not a good piece of legislation as written.

It was suggested that the committee should encourage maternal mortality study committees in all of the hospitals in the state and that the committee might also expend effort toward public information relating to immunization needs.

The matter of presenting of the maternal deaths for discussion at the Annual Session was discussed. It was noted that a panel of three Ob-Gyn men will be guest speakers at the meeting and that this type of program could be very interesting and informative to those attending. The suggestion was submitted to the Scientific Sessions Committee.

The second meeting of the Maternal and Child Health Committee was held in Lincoln on December 19th. At this meeting the Chairman reported that he had received several communications from other State Medical Societies asking information about the activities of the MCH Committee in Nebraska. Some of these were asking for copies of the Nebraska law relating to records of investigating committees, and some inquired about our method of reporting maternal deaths. All of these were answered. The Committee was informed that the Scientific Sessions Committee would be able to use two or three cases of maternal deaths which have been reported to the Committee for an Obstetrics Seminar at the 1965 Annual Session. It was agreed by the Committee that this proposal will be accepted and the material would be furnished. Protocols of these cases will be prepared from the reports which the Chairman has received from Physicians in the State. Although these reports will be completely anonymous these physicians will be asked to assist in the preparation of the protocols so that

they may be as complete as possible. An attempt will be made to publish these in the Journal for April, before the Annual Meeting, and copies will be available for the audience at the Seminar. The MCH Committee will not participate in the Seminar.

The Chairman also informed the Committee that he was a member of the Nebraska Committee on Children and Youth and had been discussing with the Committee a law relating to battered children, which would be introduced by a Legislator.

The matter of compulsory testing for phenylketonuria was discussed by the Committee. The American Medical Association has taken a stand against compulsory testing for this disease, and the Nebraska Pediatric Society has also voiced such opposition. Since it is likely that such a bill will be introduced in the 1965 Legislature, the Committee may have to appear in opposition to this bill.

Although it was not discussed at the meeting of the Committee, the Chairman would like to inform the Board of Councilors and the House of Delegates that the Nebraska Committee for Children and Youth has published a directory of services for children and youth. Copies of this are available through that Committee, and the Board of Councilors and House of Delegates may like to consider the possibility of distributing these directories to the members of the Nebraska State Medical Association.

Respectfully submitted,

WARREN BOSLEY, MD,  
Chairman.

## REPORT OF MEDICINE AND RELIGION COMMITTEE

Horace K. Giffen, M.D., Omaha, Chairman; Ray Sundell, M.D., Omaha; John Campbell, M.D., Central City; J. J. Hanigan, M.D., Lincoln; Dwaine Peetz, M.D., Neligh.

The first meeting of the Committee was April 22, 1964 at Lincoln. Dr. Sievers introduced Mr. Eberlein from the Department of Medicine and Religion of the AMA. He discussed the scope and meaning of the relationship between doctors and ministers in dealing with the "whole man" as a patient. He outlined some of the spheres of organization and discussions both on a local and state level.

The next meeting of the Committee was August 5, 1964 also at Lincoln. Dr. Musselman, Chairman of the Scientific Sessions Committee proposed a seminar for the annual sessions April 1965. He introduced Arne Larson from the office of the AMA. He called attention to the importance of the physicians carrying the initiative in the program, but suggested that for the meeting presenting the materials, clergy of all faiths should be invited.

The next meeting was October 16, 1964. Dr. Musselman again presented a desire for a seminar of about 1½ hours on April 29, 1965. He again presented Mr. Larson who stated that the primary goal is to create a favorable climate of understanding between physicians and clergy in treating the "whole man." Various programs from different parts of the country were presented and the Committee decided to accept the responsibility to hold

a meeting in the Music Hall of the Omaha Auditorium. When this possibility was studied another meeting was called for October 27th at Omaha. At this meeting Dr. Horace K. Giffen was made Chairman due to the resignation of Dr. Moessner. It was decided to attempt to present a panel discussion with doctors and clergymen and end the program with the film, "The One Who Heals." Several possible speakers were considered and it was decided to confer with Dr. McCleave for final selection for the program.

Following this meeting, upon conversation with Dr. McCleave, he urged that we only have two speakers on the program because attempts at more were usually unsuccessful. He suggested Dr. Rex Kenyon, a Pathologist from Oklahoma City to represent medicine and he would represent the clergy. Dr. Kenyon has accepted the assignment which has been verified, in writing. The Auditorium has been reserved for Thursday morning at 11 o'clock on April 29, 1965.

Our Committee is open to suggestions as to who should be invited to this important meeting.

Respectfully submitted,

HORACE K. GIFFEN, MD,  
Chairman.

#### REPORT OF PLANNING COMMITTEE

Dan A. Nye, M.D., Kearney, Chairman; L. S. McNeill, M.D., Hastings; Harley Anderson, M.D., Omaha; H. V. Nuss, M.D., Sutton; Donald Purvis, M.D., Lincoln; Bernard Magid, M.D., Omaha.

The Planning Committee held two meetings during 1964, one on June 11th and one on November 19th.

At the June 11th meeting, the committee received and discussed four proposals which the President of the Nebraska State Medical Association, Dr. Richard Garlinghouse had proposed in his Inaugural Address and which were referred to the Planning Committee by the House of Delegates. The four proposals given to this committee for consideration were as follows:

1. A permanent headquarters office building.
2. Closer cooperation between county medical societies and the Nebraska State Medical Association.
3. The "Circuit Rider Courses."
4. Emergency care unit at the Legislature.

The matter of the "Circuit Rider Courses" was presented at the meeting and there was considerable discussion as to whether or not there was validity in instituting the old circuit rider courses which were held from 1953 through 1957. In this program, a team of physicians traveled throughout the state for six days, stopping in different cities each day to present scientific programs. It is the understanding of the committee that the programs were dropped because of the dwindling attendance and because of the fact that the two medical schools had indicated an interest in increasing their activities in postgraduate programs.

During discussion by the committee, there still appeared to be interest by the out-state physicians to have such programs. We have recommended that membership of the Association be circularized to

determine what their feelings are concerning the reactivation of such a program.

A number of the membership have answered our request regarding their interest in re-establishing some type of Postgraduate Course such as the "circuit rider course." In each instance the physician has indicated an interest in having this program re-established. In view of these favorable comments this committee recommends that a yearly postgraduate course program be approved and that a committee be directed to draft plans for such a project on a yearly basis. In studying this project the committee should take into consideration the following factors:

1. Use of local or out-of-state speakers.
2. Length of course.
3. Method of financing.

The second item discussed at the meeting, was the emergency care unit at the Legislature. It was suggested that it would be an excellent move on behalf of the Nebraska State Medical Association if it were to provide a physician in attendance at each day of the Legislative session. The purpose would be to render the emergency care to members of the Legislature if the need arose. It was suggested that physicians throughout the state offer to come in for one day to serve in this capacity. There was considerable discussion on this particular proposal as it was felt that many physicians would not be willing to come in from the out-state areas, and it was unfair to ask the Lancaster County Medical Society in Lincoln, to share the complete burden of such a program. We continued discussion of this particular program at the November 19th meeting and felt that such an extensive program of having a physician actually present at the Legislative halls every day was not absolutely necessary. It was recommended that the Lancaster County Medical Society be contacted and asked if they would provide emergency service on a call basis for members of the Legislature. It was felt that this would accomplish the same purpose and would of course cancel the need for many physicians to travel in for a one-day stint at the Legislature.

The third proposal handed to the committee and discussed at its June meeting, was the matter of closer cooperation between county medical societies and the Nebraska State Medical Association. At this meeting, the possibilities of establishing a program for state and county medical society officers was given serious consideration, and it was decided that such a program should be presented in the fall. The First Annual Conference of State and County Medical Society Officers became a reality on September 30 and October 1, at a day and a half meeting in Kearney. All county medical society presidents and secretaries were invited as well as the Councilors, the Board of Trustees and officers of the Association. The meeting was considered a tremendous success with 60 individuals attending. A survey was sent out to the registrants following the Conference, asking if they approved of having continued Conferences in future years and all those who returned the questionnaire indicated they would like to have the continuation of such programs. We are quite pleased with the results, and we feel that it gave a greater number



of our members of the Nebraska State Medical Association and the officers at all levels a better insight of the activities and problems of the Nebraska State Medical Association. Plans will be made to hold a similar Conference in 1965.

The fourth item considered was the permanent headquarters office building proposed by Dr. Garlinghouse. At the meeting, Dr. Garlinghouse presented the committee with his feelings on the proposal and also read letters from both Executive Secretaries and Presidents of a number of states similar in membership size to the Nebraska State Medical Association who now have their headquarters office buildings. The letters all were highly favorable of such a building and recommended that our Association give serious consideration to such a proposal. This is, of course, a very important step in the program of the Nebraska State Medical Association, and for this reason we are going to present the information which we have available on such a proposed building at this time in some detail. In addition to these proposals, Dr. Garlinghouse and Mr. Neff will give verbal reports and have visual aids which they will present to the various bodies considering this proposal.

#### BACKGROUND:

The Nebraska State Medical Association has been located in its present headquarters since 1949. It has total office space of approximately 1,000 square feet, and because of the tremendous increase in activity, the Association has far outgrown its present facilities. The need for storage facilities is pressing, due to the large amount of records and files that must be retained. There is a need for a larger work room because of the addition of new machinery to expedite the work load. There are no facilities for committee meetings in the headquarters office. The office is located downtown and is not easily accessible because of parking problems.

#### ADVANTAGES OF A NEW BUILDING:

1. Fulfill the immediate need for additional space.
2. Pride of ownership.
3. Symbol of stability and permanence.
4. Availability of material and records for meetings.
5. Facilities for a small library on scientific and socioeconomic materials.
6. Use of facilities by the Auxiliary and other allied friends.
7. A facility to accommodate further expansion in the future.
8. Facilities for officers to work and meet with other individuals and groups of similar stature.
9. A sense of professional pride and cohesion in the Association.
10. Gives employees a modern setting in which to work and gives them a sense of ownership.

#### COMMENTS OF STATE PRESIDENTS OF STATES SURVEYED CONCERNING THEIR BUILDING:

Due to the length of the letters, we will only excerpt some of their comments:

"The home office building has been a source of pleasure, a place to meet and do business with a feeling of security . . ."

"I think that it can best be summarized by saying that we feel better about having our own building and the appearance that this presents to doctors and to the public . . ."

"We have adequate storage space, excellent work space for processing mass mailings, etc. Working conditions with the building are ideal and there is no question but that the production of the staff is better and carried on with less effort than ever before . . ."

"Advantages for having in your building adequate space for multiple committee meetings the same day are obvious. In addition, the advantage and convenience of having all records instantly available to the Board and the committees that might need them are very helpful."

"In response to your letter of April 11, asking about the Medical Association building, I would like to state at once that I think it is a fine idea. In addition to there being some actual savings, I feel that the pride of ownership among our physicians, and the advertising to the public that we have a place all of our own is worth something . . ."

"To my knowledge, none of us has ever regretted the step we took in deciding first to have a home office building, and secondly to go ahead with its construction. Such a building offers tangible evidence of the Association and gives an air of permanence even to an organization which is 134 years old . . ."

#### FACILITIES TO BE INCLUDED:

It is the feeling of the committee that the headquarters office building should have meeting room space for both large and small meetings. In his presentation to the committee, Dr. Garlinghouse recommended that a meeting room sufficiently large to hold 100 persons be considered. This room could in turn be subdivided into smaller rooms to hold simultaneous meetings. He felt that the room should be large enough to hold a meeting of the House of Delegates.

The building should also contain offices for the Executive Secretary, Assistant Executive Secretary, the President, a secretarial area, reception area, work room, library, kitchen suitable for catering, and full basement for storage and equipment.

#### AMOUNT OF GROUND SUGGESTED:

The purchase of at least an acre of ground is suggested so there will be ample space for the building, future expansion if needed, and off-street parking.

#### SUGGESTED SITE FOR THE BUILDING:

The proposed site is located at 62nd and Cotner Boulevard. A city map of Lincoln will be available to show the proximity of the land to the City of Lincoln. Cotner is the City Route for Highway 6.

This location is accessible from the Interstate via Cotner Blvd.; from the West via "O" Street, the main artery east and west through Lincoln; from



the south via Highway 77 and East "O" Street. From the city limits at any of these points, it is no more than twenty minutes to the proposed site. It is approximately 10 minutes from downtown Lincoln.

The ground lies north of Gateway Shopping Center. Cotner Boulevard which fronts the proposed property, feeds into the "O" Street arterial at 56th Street; four blocks from the building site. The ground to the west of the building is owned by the Architectural firm of Unthank and Unthank who are committed to build an office building of 10,000 square feet on this property. The ground to the east of the building site, is zoned for multiple family dwelling and will probably be developed into garden apartments. The ground to the north is occupied by the Trendwood Apartments. The area is considered very favorably for our type of operation. Cotner Boulevard is currently a two-lane road but there are plans to make it four lanes in the future.

#### COSTS OF THE PROPERTY AND BUILDING:

The Association has received a firm offer to purchase ground at the rate of \$32,500 per acre. This cost is the most economical that has been found for similar locations which have been investigated. The current owners have offered the Association up to an acre and a half of ground which would have a frontage of 180 feet and depth of 250 feet. At the rate of \$32,500 an acre, this would amount to \$48,750.

Cost of the building would be determined by its size. It is suggested that a minimum of 3500 square feet be considered in order to provide for administrative and meeting facilities. Actual total square feet would be 7,000 as the building should have a full basement.

Visits with the architects indicate that a building of this type would probably cost at least \$27 per square foot, which would mean a building completed and ready to move into.

In the verbal report by Dr. Garlinghouse, more definite costs will be presented than we can include in this report because of our printing deadline.

#### SUMMARY:

At its meeting on November 19, 1964, the Planning Committee spent considerable time discussing the proposed headquarters building from all angles with the help of the information which we have presented in this report. After completing discussion, they approved the concept of the permanent headquarters office building and recommended that such a building be built. The committee further approved the recommendation that the House of Delegates make provisions for a permanent building committee of five members to be appointed by the President. It was further recommended that the building committee make a progress report at the Annual Session in April, 1965. With the official approval of the above actions of the Planning Committee, the following recommendations are made:

1. That a permanent headquarters office building be built and that the ground at 62nd and Cotner Boulevard, Lincoln, be purchased for this purpose.

2. That the House of Delegates create a permanent Building Committee of five to be appointed by the President who shall serve as chairman. This committee shall have authority to approve all building plans. This committee shall make a progress report to the Annual Session (April, 1965).

3. That a combination of the following methods of finance be recommended.

Special Assessment  
Cashing of Securities in part or total  
Voluntary Contributions  
Financing through loans.

Respectfully submitted,

DAN A. NYE, MD,  
Chairman.

#### REPORT OF POLICY COMMITTEE

R. E. Garlinghouse, M.D., Lincoln, Chairman; Willis D. Wright, M.D., Omaha; R. F. Sievers, M.D., Blair; O. A. Kostal, M.D., Hastings; A. J. Offerman, M.D., Omaha.

At the time of the writing of this report, the Policy Committee has had three meetings. However, with the Unicameral being in session, it is highly probable that there will be one or more meetings of the Policy Committee between this written report and the Mid-Winter Meeting of the Council and the House of Delegates. Any such meeting will be further reported to the Board of Councilors and the House of Delegates at that time.

The first meeting was held in conjunction with representatives of the Nebraska Hospital Association on May 28, 1964. This was a pilot meeting in which mutual problems were freely discussed. However, no definitive action was taken, but it was decided to convene at a later time. The actions taken at this later meeting will subsequently be reported.

The second meeting was held on September 16, in conjunction with officials of Blue Shield, the fiscal agents for Medicare. A summary of the action of the Committee follows:

|                                  |    |
|----------------------------------|----|
| Number of Cases Considered       | 36 |
| Full Amount Allowed              | 23 |
| Payment Reduced                  | 6  |
| More Information Requested       | 2  |
| Payment After Completion of Form | 1  |
| Additional Payment               | 1  |
| Payment Refused                  | 3  |

In addition, compulsory PKU testing was discussed and referred to the next meeting with the Nebraska Hospital Association officials.

A decision was made to request changes in Medicare charges on newborn normal hospital care from \$15 to \$20, and exchange transfusion from \$125 to \$150. This request was later refused by Medicare officials.

A resolution memorializing Dr. Norman Welch and to be presented to the House of Delegates of the AMA at the Clinical Session by Dr. Joseph McCarthy, was adopted.

The National Advertising Campaign against King-Anderson type of legislation to be financed by the AMA but with local arrangements to be

made by the Nebraska State Medical Association, was discussed by Mr. Neff.

The final meeting of the Policy Committee was held on October 29th. It was held in conjunction with officials of the Nebraska Hospital Association. The following mutual items of interest were discussed:

1. **PKU Tests:** It was the general feeling the PKU testing should not be compulsory, but rather an educational project of organized medicine. It was hoped that the Maternal and Child Health Committee of the Nebraska State Medical Association would consider this problem and report to the House of Delegates. (The House of Delegates of the AMA at the Miami meeting, passed a resolution against legislation requiring compulsory PKU testing).

2. **Nursing Home Construction:**

It was noted that in some instances, Nursing Homes are located in communities where there is no resident physician.

Feasibility of forming a Nursing Home Council to be patterned after the Hospital Council.

Problem of enforcing accreditation standards in Nursing Homes and problems of licensure of Nursing Homes.

Review and revision of Nursing Home regulations was discussed.

Utilization Committees and Auditing Programs were considered.

3. **Kerr-Mills:** Inadequate knowledge of the program is felt to be one of the major problems in this plan. Mr. Neff explained the intended pamphlet to be published by the Nebraska State Medical Association. (This was not implemented because of the obvious changes to be made by the current Unicameral). Possible changes in the present law were discussed but no specific recommendations were made.
4. **Accreditation:** Plans for accreditation of the hospital of under 25 beds were fully discussed including the Kansas program for accreditation. It was felt that physician interest is the most important motivating factor. Programs to obtain more accredited hospitals were discussed.

This completes the report of the Policy Committee. No specific recommendations accompany this report.

Respectfully submitted,

R. E. GARLINGHOUSE, MD,  
Chairman.

## REPORT OF PREPAYMENT MEDICAL CARE COMMITTEE

John J. Grier, M.D., Omaha, Chairman; James D. Hayhurst, M.D., Scottsbluff; James F. Kennedy, M.D., Alliance; Lee Stover, M.D., Lincoln; Vincent S. Lynn, M.D., Geneva; Orvis A. Neely, M.D., Lincoln.

Your Prepayment Medical Care Committee is pleased to report that Nebraska Blue Shield con-

tinued in 1964 the active, progressive pace that became so evident in 1963.

Nebraska Doctors of Medicine continued their support of the Plan by reaching a new high in the number of Participating Physicians. A publicity campaign was based upon the signing of a St. Paul doctor as the 1,200th Nebraska doctor to back American Medicine's answer to the threat of Federalization. On January 1, 1965, this number had increased to 1,218.

1964 showed the largest gross enrollment in the history of Nebraska Blue Shield. 260,096 Nebraskans were members at the end of the year. During the year, 135 new groups were formed. 12 of these consisted of 25 or more members, the largest being the International Brotherhood of Electrical Workers in Omaha with 481 members plus their dependents and Roehr Products, Incorporated, of Norfolk with 112 members plus dependents.

The Non-Group Agent Program started in 1963 was continued in 1964, but with some problems. It is very difficult to hire the type of person desired on a part-time basis. The sparse population and size of the state do not warrant hiring full-time agents in outstate localities. Full-time agents are employed in the more populous areas. Local physicians could assist Blue Cross-Blue Shield in helping them find local part-time agents.

The Merit Rated Program for groups of 25 or more members continues to be successful, and may in time help to hold down rate increases, although no one area seems to have the entire answer.

The Anti-Duplication and Subrogation Clauses initiated by some employers seem to be justifying their existence by helping to hold down unnecessary expenditures and duplication of coverages.

Utilization Committees also seem to have merit in those hospitals that are beginning to actively use them.

Anything and everything that can be done by everyone to help hold down unnecessary increased costs, incidence and utilization is of vital importance. The more Blue Shield has to pay for services the more they have to charge members for dues and thence more the public turns to government for answers. Last year, Nebraska Blue Shield services were up 12% per thousand members. This has been the trend for the past several years, but has become more pronounced during the past year.

An all time high was reached by Nebraska Blue Shield in 1964 for the number of services paid. 239,230 services amounting to \$4,957,589.77 averaging \$20.72 per service were paid during the year.

1964 was the 20th anniversary of Nebraska Blue Shield. It has come a long way since 1944 when it was formed by Nebraska Physicians as a surgical plan. The highlight of the anniversary observance was an advertising campaign and testimonial dinner.

Plan personnel called on approximately 400 doctors' offices during 1964 to answer questions and assist in processing Blue Shield cases. Approximately 700 physicians were contacted personally during this period. Fourteen Workshops for Doctors' Assistants were conducted this fall. Meetings



with six County Medical Societies were also held during the year.

Exhibits and displays were installed and manned at the State Medical Association's Annual Meeting and the Midwest Clinical Society Meeting. Literature and reprints were furnished prestamped and addressed to the Blue Shield Committee of the Women's Auxiliary to the Nebraska State Medical Association for mailing with a covering letter to all County Medical Society Auxiliary Blue Shield Committees. Newsletters and informational material are also mailed to the various health disciplines.

Members of your Prepayment Medical Care Committee have attended all regular and special Nebraska Blue Shield Board Meetings during 1964. Several other meetings pertaining to prepayment were also attended by one or more of your Committee Members during the year. Two of the more important ones were the National Blue Shield Meeting held in Chicago on October 12 and 13, and the National Voluntary Health Conference sponsored by the AMA Council on Voluntary Health Agencies held in Chicago on September 17 and 18. The subject was "The Voluntary Health Movement Today and Tomorrow." Some of the participants were the National Health Council, National Social Welfare Assembly, U.S. Public Health Service and representatives of business and industry. The conference was directed to the better understanding of mutual problems which affect both lay and professional people in dealing with voluntarism and health.

Nebraska Blue Shield continues to be recognized as one of the leading Plans in the nation. Our observance and contacts with its personnel are of the highest accord, and their loyalty and devotion are unexcelled.

The Prepayment Medical Care Committee recommends continued approval and full support of the Nebraska Blue Shield Plan by the Nebraska State Medical Association.

Respectfully submitted,

JOHN J. GRIER, MD,  
Chairman.

#### REPORT OF PSYCHIATRY COMMITTEE

Chas. W. Landgraf, Jr., M.D., Hastings, Chairman; Robert S. Wigton, M.D., Omaha; Chas. G. Ingham, M.D., Norfolk; L. I. Grace, M.D., Blair; H. C. Henderson, M.D., Omaha; John Baldwin, M.D., Lincoln; J. Whitney Kelley, M.D., Omaha.

The Committee on Psychiatry of the Nebraska State Medical Association met seven times in 1964, and the next meeting will occur 21, January 1965.

The Committee has continued to represent the Nebraska State Medical Association at many meetings at state and national levels.

- a. The 2nd National Congress on Mental Illness and Health sponsored by the American Medical Association Council on Mental Health at Chicago in November 1964.
- b. Regional and State Meetings concerning the Nebraska "Plan for Planning" organization's attack on Mental Illness.
- c. Several members of the Committee serve in important positions in the "Plan for Planning" organization.

The Nebraska State Medical Association will not publish to the membership a collection of the statutes concerning the mentally ill as indicated in the 1963-1964 Annual Report of this Committee. The Nebraska Psychiatric Institute accomplished this before the Nebraska State Medical Association achieved final printing.

This Committee supported a statistical study of psychiatric practice made by the Nebraska Psychiatric Institute. A report of this survey will shortly be available as promised by the Nebraska Psychiatric Institute.

The Committee will publish in the February 1965 issue of the Nebraska State Medical Association Journal the first of many reports to the Nebraska State Medical Association. The text of this first report follows:

#### "REPORT TO THE NEBRASKA STATE MEDICAL ASSOCIATION"

Your Committee on Psychiatry of the Nebraska State Medical Association has completed plans to report to you periodically in this Journal those of its activities which may be of help in your treatment of mentally ill patients, and information of interest to you in the field of psychiatry. This is the first of many reports.

The Committee also will furnish service of varying types to aid you in psychiatric treatment and in disposition of mentally ill patients.

It goes almost without saying that most psychiatry is practiced by the family physician in the patient's own community — which is as it should be. Every doctor has his difficult behavior problem patients and families — the alcoholic, the chronic mal-content, the one who may seem to "enjoy" ill-health, the perennial failure, the marital slugfest, and so on. When you feel you're at the end of your rope (or, preferably, before) we would hope that you would call any psychiatric colleague, those in state service or those in private practice, for a telephone consultation anytime, day or night — often this will be enough to help you set things back on the right track and keep the patient at home carrying on his normal duties.

Following is a list of psychiatric facilities, public and private, and of psychiatrists in private practice and state clinics. Returning a patient to his home after a prolonged absence may prove to be a greater problem than the one which resulted in his being sent away in the first place.

Plans are underway for each Nebraska State Medical Association Councilor to reactivate "Councilor District Medical Society" meetings in his bailiwick; we are certain that your psychiatric colleagues would be eager to take part in such meetings in all the Districts and offer practical aid in psychiatric treatment to the physicians attending these meetings. These meetings will bear some resemblance to the system of traveling "clinics" used in Kansas.

It is hoped such meetings will begin shortly after 1 January 1965.

Please write this Committee or your Councilor about any comments, suggestions, criticisms, or advice you want to give.

Publication of this Report in the Journal will



be preceded by advertisement in the Bulletin and a list of personnel and facilities will be published.

The Committee has suggested the creation of a "Joint Medical Advisory Council" in the field of mental illness. This Council can provide, as a beginning, advice to planning groups and the legislature. It will be composed of one representative each from Creighton University School of Medicine, University of Nebraska College of Medicine, the District Branch of the American Psychiatric Association, private psychiatric practice, and one psychiatrist and one general practitioner from the Nebraska State Medical Association.

Affirmative replies to letters requesting cooperation have been received from all of the above except the University of Nebraska College of Medicine; another letter has been written to the new Dean at that Institution requesting its participation again.

Consideration should be given to the use of this Council in the permanent organization responsible for the attack on Mental Illness in Nebraska since the present "Plan for Planning" organization is temporary, only.

The Committee has retained an extra member, J. W. Kelley, MD, of Omaha, for the additional Association year of 1964-1965 to improve continuity of effort.

It was believed desirable to effect closer liaison between the Nebraska State Medical Association of the Nebraska Psychiatric Institute through the work of this Committee. For that purpose Robert Muffly, MD, of the Nebraska Psychiatric Institute was asked to serve as the liaison member without vote, and he accepted. This position and the tenure of the member is at the discretion of the Chairman and the Committee. Dr. Muffly already has provided much assistance.

Presently, the Committee is creating an exhibit to be presented at the Nebraska State Medical Association Annual Meeting in April 1965. In as simple and in graphic a form as possible the trends in psychiatric treatment, the progress of private psychiatric treatment, the contributions of the family physician and private psychiatrist, the contributions of State Government organizations, the availability of psychiatric care in Nebraska, and a simple brochure will be presented among other information.

A bill to improve the so-called Sexual Psychopath Act will be submitted to the legislature.

The Attorney General will be asked further to clarify medical practice act regarding the question of what constitutes practice of medicine.

In the matter of "Councilor District Medical Society Meetings" the Councilors respectfully are urged to plan meetings in their Districts during the year and to include as often as practical subjects of psychiatric nature for presentation. This Committee is anxious to provide, and promises, all possible aid.

The Chairman of the Committee on Psychiatry expressed his deep gratitude to the members of the Committee, the Executive Secretary and Assistant Executive Secretary, and to the Immediate

Past President Sievers and President Garlinghouse for their invaluable help during the year.

Respectfully submitted,

CHARLES W. LANDGRAF, JR., MD,  
Chairman.

## REPORT OF PUBLIC HEALTH COMMITTEE

Carl J. Potthoff, M.D., Omaha, Chairman; R. L. Grissom, M.D., Omaha; E. A. Rogers, M.D., Lincoln; Edwin D. Lyman, M.D., Omaha; H. C. Stewart, M.D., Pawnee City; Sam Fuenning, M.D., Lincoln.

The Committee is engaged in alerting physicians to the Emergency Medical Identification symbol, whose use now has been recommended by the American Medical Association and many national and international medical and voluntary health organizations. Because of the remarkable effectiveness of medical care we have many aged and handicapped people who survive for lengthy periods though affected with medical conditions that are not quickly identified if the patient is encountered under emergency conditions by a physician other than the one who usually attends him. Such people should wear the so-called universal symbol and should also carry a health information card such as is available from the American Medical Association or from their private physician. Devices bearing the symbol that may be worn in a readily detectable way are usually jewelry items. Since many jewelers are not aware of the symbol and the devices and have not carried the jewelry items in stock, the Committee is working with the State Jewelers Association in order to inform the jewelers about the symbol.

Respectfully submitted,

CARL J. POTTHOFF, MD,  
Chairman.

## REPORT OF PUBLIC RELATIONS COMMITTEE

Leroy W. Lee, M.D., Omaha, Chairman; H. M. Nordlund, M.D., York; E. D. Zeman, M.D., Lincoln; Theo. Koefoot, Jr., M.D., Broken Bow; Peyton Pratt, M.D., Omaha; Robert Gillespie, M.D., Lincoln; John Coe, M.D., Omaha; Dan Nye, M.D., Kearney; Max Raines, M.D., North Platte.

This committee was revitalized and stimulated by action of the House of Delegates of the Nebraska State Medical Association in February, 1964, in allowing a budget for use of the Committee. Ayers and Associates were engaged April 20, 1964, and have functioned at a monthly fee of \$400.00 during the year. They have rendered valuable service to the Administrative Staff of our Lincoln office as well as to the Public Relations Committee. They were instrumental in Mr. Neff and Mr. Schellpeper meeting many individuals in the communications industries, which opportunity would not otherwise have occurred. Their art department has been very helpful in the design and production of several releases.

The Public Relations Committee had several meetings during the year: on March 18, 1964; April 14, 1964; May 20, 1964, and December 16, 1964. At the April Meeting, Mr. James R. Hickox of the AMA presented the Suggested Public Relations Program at State and County Level as advocated by the AMA. The program consists of the following:

(1) Carrying on an emergency call system, (2) Local grievance committee, (3) A survey of radio, TV, and newspapers in order that press relations might exist, (4) Development of a Speakers Bureau both locally and on the State-wide basis, (5) Orientation of society members especially the new members, (6) Providing medical care for all citizens regardless of ability to pay, (7) Initiation of Public Service Projects, and (8) Citizenship activities — the need for more physicians to partake in local community service clubs and activities.

A meeting of very significant importance to Public Relations was that of the "First Annual Conference of State and County Medical Society Officers," which was held in Kearney, Nebraska, September 30, 1964, and October 1, 1964. The meeting was not under management of the Public Relations Committee primarily but was begun by Dr. Garlinghouse. It served the important function of getting the message, of what we are trying to do in medical economics, medical politics, and layman relationships, across to those within our own organization who are molding the opinions of other physicians and laymen as well.

The "9th Annual Report of Criteria of Good Voluntary Health Insurance and Statistical Data on Health and Accident Business in Nebraska" has been prepared but not mailed as of this date. At the request of Dr. Garlinghouse the Committee voted to withhold future mailings until consideration by the House of Delegates in February 1965. There have been some objections to this report by certain persons from the Voluntary Insurance Industry; there is some question that it might be doing more harm than good. Blue Cross and Blue Shield officials are in favor of the continuation of mailing of the brochure.

The 1964 Hall of Health at the State Fair had 17 participating organizations, and was visited by 50,000 persons. The main attraction appeared to be the AMA Exhibit "Life Begins." The film "Gravity of Death" was shown 179 times during the year to a total audience of 5,900 persons. There are 9 copies of this movie available for group showing.

The Kerr-Mills Program was made effective in Nebraska retroactive to January 1, 1964. It seems to be functioning satisfactorily and taking care of the problem of those who are medically indigent over 65 years of age in Nebraska, however, only one third of the total funds allocated for the program have been used this year. It is felt by the AMA and this Committee that a campaign should be made through various informative agencies to alert the public on the availability and qualifications for use of this service. It is felt that for purposes of utilization that a \$3,000.00 annual income level for a couple would be more realistic as a "poverty level."

As a result of a Speaker's Bureau Workshop which was held July 22, 1964, at the Cornhusker Hotel, conducted by 3 representatives from the AMA, we have at the present time 46 volunteer speakers from the membership of the State Medical Society. A file of various speeches and other data is kept in the headquarters office and is available to these persons.

Mr. William Schellpeper and Staff have visited

all eight TV stations in the State and nine of the radio stations in the Omaha and Lincoln areas. The purpose of these visits is to meet management and to make known to them the materials available from the State Medical Society and the AMA which they might wish to use in their programming. The "Code of Co-operation" between the news media and the Nebraska State Medical Association approved in 1949 has been reviewed and updated. This revised code was presented to the Public Relations Committee and approved at the December 17th meeting. The Committee also directed that the Code be sent to the American Medical Association for any comments and then made a part of this report. This Code is attached to this report and presented for approval at the Mid-winter meeting. Almost all radio stations in the State now receive the "Health and Safety Tips" from the AMA. There are plans to re-write these and orient them toward Nebraska using the name of the Nebraska State Medical Association.

The results of the November election would indicate among other things that there is a great need for education of the public regarding medical care services, hence even a greater need for the Public Relations Committee to pursue a vigorous course of action. The 74th Session of the Nebraska Legislature will convene the first week in January and the 89th Congress the same date. It is hoped that those in legislative positions will take advice from organized medicine regarding legislation that involves the health of the American Citizen. It is a sad day when politicians and laymen set themselves up as being more knowledgeable concerning medical matters, than professional persons who have spent a life-time successfully rendering medical care.

Respectfully submitted,

L. W. LEE, MD,  
Chairman.

## CODE OF COOPERATION ADOPTED BY

Nebraska State Medical Association:  
(House of Delegates)

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(Date)

Nebraska Hospital Association:  
( )

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(Date)

Nebraska Broadcasters Association:  
( )

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(Date)

Nebraska Press Association:  
( )

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(Date)

## PREAMBLE

The purpose of this code is to promote understanding and cooperative action between the allied health professions and those who report medical news. It is recognized that the primary obligation



of all physicians and hospital personnel is the welfare of the patient. Similarly it is recognized that the news media exist for the common good to bring matters of general interest and importance to the public quickly and correctly.

The recommendations proposed in this code shall not be construed by members of the Nebraska State Medical Association and the Nebraska Hospital Association as a breach of the time-honored Code of Medical Ethics which has condemned the seeking of personal publicity by physicians. This code has been created, in keeping with the times, to provide for a relationship between physicians, hospitals and communication facilities which will permit the accurate dissemination of medical news.

#### NEBRASKA STATE MEDICAL ASSOCIATION

The personnel of the executive office of the Nebraska State Medical Association shall aid representatives of the news media to obtain authentic information as promptly as possible on health and medical subjects. If desired information is not immediately available, the executive office shall obtain the information or shall refer the news media representative to a competent authority.

Officers, committee chairmen, or designated spokesmen of the Nebraska State Medical Association may be quoted and or named when discussing medical news for the purpose of giving accurate information to the public. This shall not be interpreted as personal publicity, but as action in the best interests of the public and the medical profession. A list of current spokesmen of the State Medical Association shall be supplied to representatives of the communications media, and shall be on file in the executive office and the office of the county and district medical societies throughout the state.

County and district medical societies in Nebraska shall adopt a policy similar to that outlined in the foregoing paragraph. These societies shall forward the names of their spokesmen to their local news media representatives as well as to the executive office of the Nebraska State Medical Association.

County and district medical society spokesmen shall keep the executive office of the Nebraska State Medical Association advised regarding medical news which they believe should have statewide or national coverage.

The wishes of the attending physician or surgeon as to the use of his name or a direct quotation concerning the condition of his patients shall be respected.

It is the responsibility of the physician to give pertinent information for release (see final section of this code for outline of information for public release) to the designated hospital spokesman, or, in special instances, specify that all requests for information be referred to him personally.

It is the responsibility of the physician to make the final decision as to what information may jeopardize the doctor-patient relationship or violate the confidence, privacy, or legal rights of the patient.

#### HOSPITALS

Each hospital shall designate spokesmen who obtain authentic information from the attending physician regarding patients in the hospital and may release such information at any time during the day or night to the news media representative. Hospital spokesmen shall be guided by the provisions set forth in the final section of this code and the instructions of the attending physician.

Hospital spokesmen shall be made known to the proper officials at all communications facilities in the community served by the hospital. Hospital spokesmen may provide only information that shall not jeopardize the hospital-patient relationship or violate the confidence, privacy or legal rights of the patient.

When information is released to the news media regarding hospital procedure, equipment, facilities for treatment, or other features of hospital service, hospital spokesmen shall be careful to refrain from giving the impression that such facilities exist only in the hospital named, unless that is the fact.

#### NEWS MEDIA

Representatives of the news media shall be ever mindful of the obligations of the physicians and hospitals to patients and shall cooperate by refraining from any action or demand that might jeopardize the health of the patient or violate the confidence, privacy or legal rights of the patient.

When a physician or hospital spokesman is quoted directly and by name, representatives of the news media shall make certain that the quotation prepared for release is accurate, both in content and in total context.

Representatives of the news media shall exercise editorial judgement when disseminating medical information and make certain that it does not embarrass the patient, the physician or the hospital.

Representatives of the news media shall make every reasonable effort to obtain authentic information from a qualified source, as indicated in the foregoing sections.

#### INFORMATION TO BE MADE AVAILABLE TO NEWS MEDIA

##### Accident or Emergency Cases:

- Name, age, marital status, address, occupation and sex of persons involved.
- Nature of the case such as automobile accident, explosion, shooting, fall, etc.
- Extent of injuries and their degree of seriousness when ascertained. In most cases, condition reports limited to such words as "good," "fair," "serious," or "critical" are sufficient.
- Name of attending physician (to be used only with the physician's consent).

##### Illness of a personality in whom the public is rightfully interested:

- The nature of the illness, its gravity and the current condition of the patient with the consent of the patient or next of kin.
- Medical bulletins, issued at specific intervals, giving the current condition of the patient.
- The death of a patient is a matter of public



record, and may be reported — after notification of next of kin — without the diagnosis or cause of death.

#### Cases of unusual injury, illness, or treatment:

—The above information and any scientific information pertinent to the case which might be helpful in clarifying to the public the contents of the news item.

Any physician aware of such a case is urged to notify the designated spokesman of his local medical society so that the item may be released immediately to the news media.

### REPORT OF RELATIVE VALUE STUDY COMMITTEE

B. R. Bancroft, M.D., Kearney, Chairman; A. J. Schwedhelm, M.D., Norfolk; J. E. Courtney, M.D., Omaha; H. E. Mitchell, M.D., Lincoln; Robert Long, M.D., Omaha; L. D. Cherry, M.D., Lincoln.

Your Relative Value Study Committee held only two formal meetings during 1964.

The first meeting, held on February 20, 1964, again had to do with its liaison function between the State Welfare Department and the Nebraska State Medical Association. Satisfactory agreement was reached on all problems presented. These were covered in detail in the report of that particular committee meeting.

The second formal meeting of the Relative Value Study Committee was held on November 5, 1964, and was largely a discussion of the mechanics of revising the Relative Value Study, approved by the House of Delegates in February of 1961. The same procedure used in compiling the original Study was to be used. All specialty and sub-specialty groups in the state were to be contacted and their representative committee asked to review their particular section and make recommendations as to additions, deletions or other changes. Representatives of each group will then meet with your committee to discuss the changes before they are presented to the House of Delegates at the annual meeting in 1965.

While this committee held only two formal meetings in the year many problems were disposed of by personal communication and by letter.

The chairman of your committee wishes to express his appreciation of the faithful attendance of the committee and the usual excellent cooperation of the Association office.

Respectfully submitted,

B. R. BANCROFT, MD,  
Chairman.

### REPORT OF RURAL MEDICAL SERVICE COMMITTEE

Chas. F. Ashby, M.D., Geneva, Chairman; Ralph L. Blair, M.D., Broken Bow; Lyle Nelson, M.D., Crete; F. A. Mountford, M.D., Davenport; R. L. Tollefson, M.S., Wausa; Irving Weston, M.D., Lincoln.

The Rural Medical Service Committee sponsored the 14th annual Senior Medical Day, October 15, 1964 at the Indian Hills Inn in Omaha. The following program was presented:

Presiding—

R. E. Garlinghouse, MD, Lincoln  
President, Nebraska State Medical Association

“You Will Soon Be a Doctor”

Otis W. Miller, MD, Ord  
Member, Allied Professions Committee

“Why I Chose a Community Practice”

Lyle Nelson, MD, Crete  
Member, Rural Medical Service Committee

“The Doctor's Obligation to His Community”

Theo. Koefoot, Jr., MD, Broken Bow  
Member, Maternal and Child Health Committee

“The Mechanics of Establishing Your Office”

Mr. M. K. Mills, Waterloo, Iowa  
General Manager, Professional Management Midwest

“The State Board of Health: What It Has to Offer the Practicing Physician”

E. A. Rogers, MD, Lincoln  
Director, State Department of Health

“The Art of the Practice of Medicine”

J. P. Gilligan, MD, Nebraska City  
Chairman, Medicolegal Advice Committee

“The Role of General Practice in Modern Medicine”

R. F. Sievers, MD, Blair  
Immediate Past President, Nebraska State Medical Association

“Medical Ethics — The Doctor's Golden Rule”

Willis D. Wright, MD, Omaha  
President-Elect, Nebraska State Medical Assn.

Banquet Speaker—

F. J. L. Blasingame, MD  
Executive Vice President, AMA

The program seems to be more effective in the early part of the senior year and we plan to continue this practice.

Again the Auxiliary of the State Medical Society sponsored a dinner for the wives and friends of the students which was very well received. It is our feeling this is one of the highlights of the day and every effort should be made to keep this an annual affair.

At the suggestion of the Auxiliary, it was contemplated to offer an invitation to have the National Rural Health Council meeting in Nebraska. However, as the dates have been set through 1968, it was felt this offer should be made in the near future.

Respectfully submitted,

CHAS. ASHBY, MD,  
Chairman.

### REPORT OF TRAFFIC SAFETY COMMITTEE

Ralph Moore, M.D., Omaha, Chairman; Theo. A. Peterson, M.D., Holdrege; George B. Salter, M.D., Norfolk; Vern F. Deyke, M.D., Columbus; P. B. Olsson, M.D., Lexington; John Porter, M.D., Beatrice.

The Traffic Safety Committee had one meeting October 8, 1964 at the Hotel Cornhusker in Lincoln. In the past the Chairman of the Committee has met with representatives of the Nebraska Safety Council regarding possible legislation to be introduced in the last session of the legislature but no testi-

mony regarding the medical aspects of licensed renewal was requested at that time. The Public Health Service has held work houses for medical aspects of traffic safety and the AMA has forwarded publications to the Committee Chairman regarding the medical aspects so that this material will be available for review if testimony is requested to be given before the Legislative Review Committee.

The Committee supported seat belt legislation and the Chairman of the Committee testified before the Legislative Group at the last session and it is now law in Nebraska that seat belts must be installed in all cars sold in the state of Nebraska after January 1964.

The Committee decided to inform and remind members of the Nebraska State Medical Association through the Journal that it is very important that patients be warned about the effects of specific drugs prescribed on the ability to drive and possible reactions, particularly in the use of sedatives, tranquilizers and antihistamines.

Respectfully submitted,  
RALPH C. MOORE, MD,  
Chairman.

#### Alcoholism Costs Billions—

Armed with a recovery rate of 50-70 per cent and a unique industrial consulting service, the National Council on Alcoholism has launched a five-year plan to combat the employee alcoholism which costs U.S. industry \$2 billion a year.

NCA evolved the 50-70 per cent recovery rate as the result of twenty years of experience in pioneering industrial alcoholism programs. Now it is turning its sights on the nation's top five hundred corporations.

A spokesman states that there are two million employed alcoholics in the United States, representing three per cent of industry's work force, and two-fifths of the nation's 5,000,000 alcoholics.

Alcoholism affects all occupational groups, from unskilled labor to top executives, the NCA points out. — *The Pennsylvania Medical Journal*

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#### NOTICE TO ALL CONTRIBUTORS

The deadline for items to appear in the following issue of the JOURNAL is the 10th of the month. The JOURNAL goes to press on the 12th.

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# NEBRASKA State Medical ASSOCIATION

## NINETY - SEVENTH ANNUAL SESSION



Sheraton-Fontenelle Hotel  
OMAHA

APRIL 26 - 27 - 28 - 29  
1965

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## THINGS YOU SHOULD KNOW

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**This program is acceptable for 22 credit hours by the American Academy of General Practice.**

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**REGISTRATION** — Mezzanine, Sheraton-Fontenelle Hotel, 8:30 a.m., Tuesday, Wednesday and Thursday, April 27, 28, 29, 1965.

**GENERAL SESSIONS** — Ballroom and Sheraton North.

**POSTGRADUATE COURSES** — Two Courses will be conducted each morning at 8:00 a.m. These Courses are an hour in length and should be very informative. The Registration fee is \$1.00 and a Continental Breakfast will be served. Attendance is limited to 25, so if you plan to attend register at the Registration Desk.

**SEMINARS** — The Seminars or Workshops have been very popular in past years, and are once again included in the program. The guest faculty will be in attendance at these informal question and answer periods.

### OF SPECIAL INTEREST

**PAST PRESIDENT'S BREAKFAST** — Wednesday, 7:00 a.m., April 28th, Forum Room.

**SOCIAL HOUR** — Honoring the President and the President of the Woman's Auxiliary. Sheraton North, Sheraton-Fontenelle Hotel, 6:00 p.m., Wednesday, April 28, 1965.

**BANQUET** — Ballroom, Sheraton-Fontenelle Hotel, 7:00 p.m., Wednesday, April 28, 1965. Presentation of 50-year pins. Boys Town Choir. Guest speaker, Mr. Bob Devaney, Head Football Coach, University of Nebraska.

**MEDICINE AND RELIGION** — A special program on Medicine and Religion will be held Thursday, April 29th at 11:00 a.m. The program will be held in the Music Hall of the Omaha Civic Auditorium. (Two blocks north of the Sheraton-Fontenelle Hotel).

**FUN NIGHT** — A Dinner Dance will be held at Happy Hollow Country Club, Tuesday, April 27th, beginning at 7:30 p.m. There will be cocktails, dining and dancing. Tickets will be available at the Registration Desk at \$7.50 per person. J. Whitney Kelley, M.D., is the Chairman.

**GOLF TOURNAMENT** — Omaha Country Club, Monday, April 26th, 11:00 a.m., Henry L. Dworak, M.D., Richard Q. Crotty, M.D., and Stanley M. Truhlsen, M.D., Chairmen. (No Caddies available — bring pull carts).

**TRAP SHOOT** — Omaha Country Club, Monday, April 26th, 1:30 p.m., John J. Grier, M.D., Chairman.

**BOWLING** — Rose Bowl Lanes, Monday, April 26th, 1:30 p.m., Maurice Steinberg, M.D., Chairman.

**SPORTSMAN'S DINNER** — Omaha Country Club, Monday, April 26th, Cocktails at 5:30 p.m. and Dinner at 7:00 p.m.

### ANCILLARY MEETINGS

**ANNUAL BUSINESS MEETING**—Nebraska Chapter, American College of Surgeons, Sunday, April 25th, 5:00 p.m., West Room, Sheraton-Fontenelle Hotel.

**UNIVERSITY OF NEBRASKA PRECEPTOR BREAKFAST** — Tuesday, April 27, 7:30 a.m., Sheraton South, Sheraton-Fontenelle Hotel.

**AMPAC BREAKFAST** — 7:30 a.m., Wednesday, April 28th, Little Nugget, Sheraton-Fontenelle Hotel.

**ALUMNI LUNCHEON** — University of Nebraska College of Medicine, Thursday, April 29th, 1:00 p.m., Colonial Room, Sheraton-Fontenelle Hotel.

**LUNCHEON MEETING** — Nebraska State Obstetric and Gynecological Society, Thursday, April 29th, 1:00 p.m., Ballroom, Sheraton-Fontenelle Hotel.

**NEBRASKA CHAPTER, AMERICAN MEDICAL WRITERS ASSOCIATION**, Meeting and Workshop, Thursday, April 29th, 2:00 p.m., Sheraton South, Sheraton-Fontenelle Hotel.



## GUEST SPEAKERS



**R. E. GARLINGHOUSE, M.D.**  
President 1964-1965



**S. J. Behrman, M.D.**

Ann Arbor, Michigan

Graduated from the University of Cape Town, South Africa in 1944; Professor of Obstetrics and Gynecology and Postgraduate Medicine; Consultant, Wayne County General and Ypsilanti State Hospitals; Editor, "International Journal of Fertility;" Consultant to the A.M.A. Committee on Maternal Health for the "Unwed Mother." Dr. Behrman is consultant to International Planned Parenthood Federation, London. His special publications include "Fundamentals of Gynecology," several chapters in various texts, and some 50 articles in scientific journals. His avocations are boating and skin diving.



**Paul J. Bilka, M.D.**

Minneapolis, Minnesota

Graduated from the Columbia University College of Physicians and Surgeons in 1943. Dr. Bilka is presently Associate Clinical Professor of Medicine, University of Minnesota Medical School. He served in the Armed Forces, 1945-1947.



**WILLIS D. WRIGHT, M.D.**  
President 1965-1966



**E. M. Cannon, M.D.**

St. Louis, Missouri

Graduated from the University of Nebraska College of Medicine in 1939. Is presently Chief of Urology, St. Louis University School of Medicine, St. Louis City Hospital, St. Louis University Unit; Chief of Staff, Deaconess Hospital, 1956; President of St. Louis Urological Society, 1962; Vice President of St. Louis Medical Society, 1963; and served in the U.S. Naval Reserve, 1943-1946. His special publications include, co-author of "Aneurysm of Renal Artery" and "Malignant Tumors of the Spermatoc Cord and Testicular Tunics."

## GUEST SPEAKERS

### Isidore Cohn, Jr., M.D.

New Orleans, Louisiana

Graduated from the University of Pennsylvania School of Medicine in 1945; is presently Professor and Chairman, Department of Surgery, Louisiana State University School of Medicine; Surgeon-in-Chief, Louisiana State University Surgical Service, and he served in the U.S. Army Medical Corps, 1946-1947. His special interests include surgical physiology of the gastrointestinal tract, tumor transplantation, intravenous fat emulsions, and cancer of the gastrointestinal tract. His publications include 1 book and approximately 100 major publications; avocations are glass collecting, stamp collecting, and travel.



### David E. Dines, M.D.

Rochester, Minnesota

Graduated from the University of Colorado School of Medicine in 1953. Received M.S. Degree from the University of Minnesota in 1957. Served for six years in private practice of Cardiopulmonary Diseases, Denver, Colorado, and was affiliated with the University of Colorado Medical School. Has twenty-four publications to date.



### Senator Carl T. Curtis

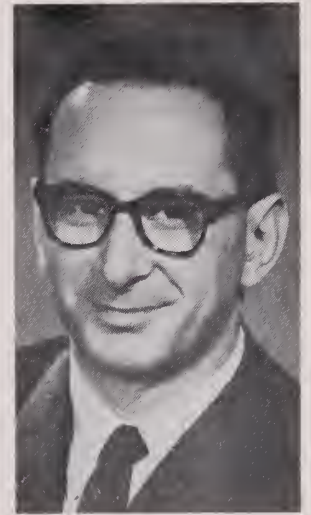
Washington, D.C.

Senator Carl T. Curtis of Minden, Nebraska, entered the United States Senate on January 1, 1955. His present term will expire on January 3, 1967. Prior to his service in the Senate, he was elected to the United States House of Representatives for eight consecutive terms. He was born near Minden, Nebraska, on March 15, 1905, and he and his family always have lived there. He attended Nebraska Wesleyan University; he is Dean of the Nebraska Delegation, having served in Congress continuously since January 3, 1939. He is a member of Masonic bodies, the Shrine, the Nebraska Bar Association, Rotary, Elks, and Odd Fellows.

### James D. Eisen, Ph.D.

Omaha, Nebraska

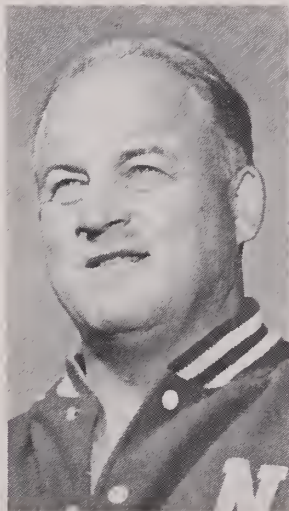
Graduated from the University of Nebraska in 1953; received M.S. Degree in 1954 and Ph.D. in 1960. Assistant Professor of Human Genetics, 1962-present; Chief, Human Genetic Research and Service Laboratories, 1962-present; served in the U.S. Army Medical Corps in Germany, 1954-1956. Dr. Eisen's research includes two years postdoctoral research in Human Cytogenetics in Sweden, 1960-1962; also investigation on the etiologies of severely retarded or malformed individuals; experimental investigations on the role of viruses and chemicals in the induction of chromosome abnormalities; his avocation is skiing.



### Coach Bob Devaney

Lincoln, Nebraska

Coach Bob Devaney's three-year record at Nebraska is amazing—28 victories in 32 games. During those three seasons, Coach Devaney has gained numerous honors. He has earned National Coach of the Week honors for the United Press International; has been named Big 8 Coach of the Year three straight seasons; was head coach of the Blue team in the 1962 Blue-Gray game and led that club to victory; under his guidance Nebraska has produced two All-Americans and 15 All Big 8 players. Coach Devaney ranks at the top among the nation's coaches since 1957. His teams have a record of 63 wins, 14 losses and 5 ties for a .806 percentage.



### Fred J. Hofmeister, M.D.

Milwaukee, Wisconsin

Graduated from the Marquette University School of Medicine in 1935. Currently Chief of Staff, Department of Obstetrics and Gynecology, Milwaukee County Hospital; Vice Chief of Staff, Milwaukee Hospital and West Allis Memorial Hospital; Associate Professor, Obstetrics and Gynecology, Marquette University; Attending Staff and Head of Department, Pediatric Gynecology, Milwaukee Children's Hospital; President, Wisconsin Obstetrics and Gynecology Society; Chairman of Professional Relations Committee and Chairman of H.E.L.P. Committee of the American College of Obstetrics and Gynecology; and Chairman, Commission Obstetric, Gynecologic and Neonatal Nursing. Dr. Hofmeister has authored numerous publications and films.



## GUEST SPEAKERS

### **Doris A. Howell, M.D.**

**Philadelphia, Pennsylvania**

Graduated from McGill University School of Medicine in 1949; Professor and Chairman, Department of Pediatrics, Woman's Medical College of Pennsylvania, 1963-present; Associate Professor of Pediatrics, Duke University School of Medicine, 1958-1963; Hematology Consultant, U.S. Army, U.S. Navy, U.S. Air Force; Advisor, American Cancer Society; and Consultant, the Hemophiliac Society Inc., Philadelphia College of Physicians. Doctor Howell's special interests are in the area of pediatric hematology. Her avocations are classical music, piano, and gourmet cooking.



### **J. B. McBean, M.D.**

**Rochester, Minnesota**

Graduated from the University of Chicago School of Medicine in 1934. Presently Instructor in Otolaryngology and Rhinology, Mayo Graduate School of Medicine; and Consultant in Otolaryngology, Mayo Clinic. He served in the U.S. Army during World War II.



### **Rex Kenyon, M.D.**

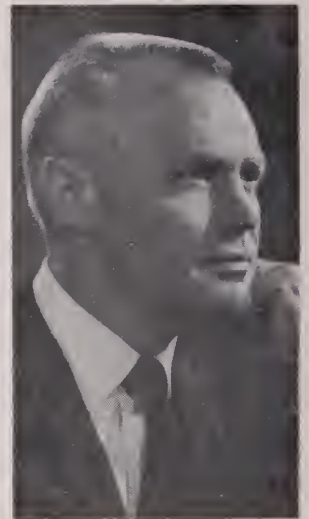
**Oklahoma City, Oklahoma**

Graduated from the University of Oklahoma School of Medicine in 1951. Currently serving as Pathologist, Saint Anthony Hospital, Oklahoma City; Assistant Professor of Pathology, University of Oklahoma; Immediate Past President, Oklahoma County Medical Society; President-Elect, Oklahoma State Medical Association; Chairman, Council on Public Policy, Oklahoma State Medical Association; and Member, Speakers Bureau, A.M.A. He served in the U.S. Navy, and his avocation is organizational medicine.

### **Reverend Dr. Paul B. McCleave**

**Chicago, Illinois**

Graduated from the College of Emporia, Emporia, Kansas. Received B.D. Degree from Presbyterian Theological Seminary, Omaha, Nebraska; Diploma from University of Geneva, Geneva, Switzerland; and an Honorary Degree of Doctor of Law from University of Tulsa, Tulsa, Oklahoma. Served as Chaplain, U.S. Navy, 1952-1954; President, College of Emporia, 1948-1952; and is currently Director, Department of Medicine and Religion, American Medical Association, coming to the A.M.A. in 1961.



### **George H. Lowrey, M.D.**

**Ann Arbor, Michigan**

Graduated from the University of Michigan Medical School in 1943. Served as Associate Professor, Department of Pediatrics and Postgraduate Medicine, University of Michigan, 1957-63. Is presently Professor of Pediatrics and Postgraduate Medicine, University of Michigan Medical School, and Director, University of Michigan Poison Information and Therapy Center.



### **Ross H. Miller, M.D.**

**Rochester, Minnesota**

Graduated from the University of Oklahoma School of Medicine in 1946. Currently Assistant Professor, Mayo Graduate School, University of Minnesota. He served in the U.S. Army Medical Corps, 1947-1949; and special interests include neurosurgery in children and neurosurgery for movement disorders.



## GUEST SPEAKERS

**Theodore R. Pfundt, M.D.**  
Houston, Texas

Graduated from the University of Oklahoma School of Medicine in 1944. Currently Director, Mental Evaluation Clinic, Texas Children's Hospital; Secretary, Section on Pediatrics, A.M.A.; Associate Professor, Baylor University of Medicine, Houston, Texas; Program Consultant, National Foundation March of Dimes. Previously served as Director, Birth Defect Center, Children's Memorial Hospital, Omaha, Nebraska; Director, Department of Pediatrics, Creighton Memorial St. Joseph's Hospital, Omaha, Nebraska. Served in the U.S. Navy Reserves. His special interests are in birth defects and mental retardation and he has several publications.



**Charles John Tupper, M.D.**  
Ann Arbor, Michigan

Graduated from the University of Nebraska College of Medicine in 1948. He is presently serving as Associate Professor of Internal Medicine, and Associate Dean of the University of Michigan Medical School. Also serves as Director of the University of Michigan Periodic Health Appraisal Program. Doctor Tupper is Editor of, MICHIGAN MEDICINE, the Journal of the Michigan State Medical Society. He has numerous publications and his avocations are automobile safety, Indian lore and medical writing.



**Edith L. Potter, M.D.**  
Chicago, Illinois

Graduated from the University of Minnesota Medical School in 1925. Presently serves as Professor, Department of Obstetrics and Gynecology, University of Chicago; Pathologist, Chicago Lying-In Hospital. Is a Past President, Chicago Pathological Society; has written 125 papers and 4 books including "Pathology of the Fetus and Infant." Her special interest is in pathology of perinatal period; and she has lectured in Europe, Asia, Africa and South America on pathology of the perinatal period. Dr. Potter's avocations include gardening and cooking. Her husband, Alvin Meyer, is an eminent sculptor.

**George S. Tyner, M.D.**  
Denver, Colorado

Graduated from the University of Nebraska College of Medicine in 1942. Dr. Tyner is serving or has served as Chief of Glaucoma Clinic, University of Colorado Medical School; Associate Professor of Ophthalmology, University of Colorado Medical School; Associate Dean and Assistant to Vice President for Medical Affairs, and Vice President, Denver Medical Society. Has numerous publications.



**Paul C. Samson, M.D.**  
Oakland, California

Graduated from the University of Michigan Medical School in 1928. Is presently Associate Clinical Professor of Surgery, Stanford University School of Medicine; Active Staff, Samuel Merritt Hospital; and Member, Board of Regents, American College of Surgeons. Was awarded Legion of Merit and also the Bronze Arrowhead for D-Day landing in South France as well as Battle Stars awarded in seven campaigns. He is author or co-author of approximately 100 scientific articles; and his avocations are hunting and deep sea fishing.



NO  
PHOTO  
AVAILABLE

**Harry K. Waddington, M.D.**

Chicago, Illinois

Graduated from the University of Illinois College of Medicine in 1943. Is currently Clinical Associate Professor, University of Illinois College of Medicine; and Attending Staff, South Shore Hospital, Chicago, Illinois. He served in the armed forces; and his avocation is golf.

## GUEST SPEAKERS

### Donovan F. Ward, M.D.

Dubuque, Iowa

Graduated from the University of Iowa College of Medicine in 1930. Dr. Ward was named President-elect of the American Medical Association at its Annual Convention in June, 1964, and succeeded to the Presidency upon the death of Dr. Norman A. Welch in September, 1964. From 1954 to his election as President-elect of the A.M.A., he was A.M.A. Vice President (1963-64); and an A.M.A. delegate from the Iowa Medical Society. He practiced surgery in Dubuque, Iowa since 1931 with the exception of 4 war-time years as a Navy surgeon; retired from Navy as Commander.



### Claude E. Welch, M.D.

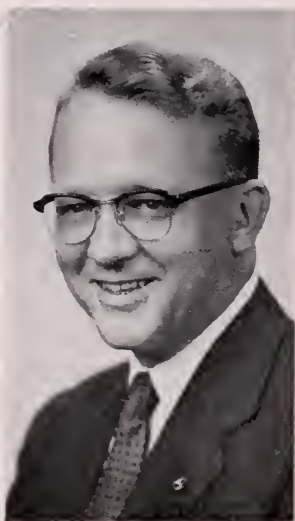
Boston, Massachusetts

Graduated from Harvard Medical School, 1932. Currently Clinical Professor of Surgery, Harvard Medical School; Visiting Surgeon, Massachusetts General Hospital; Chief of Tumor Clinic, Massachusetts General Hospital; and President-Elect, Massachusetts Medical Society. He served in World War II, discharged Lieutenant Colonel. Dr. Welch's special interests are in Gastroenterology and Tumors. His avocations are Books on Gastric Surgery, Intestinal Obstruction and Tumors of the Colon.

### Jack Wickstrom, M.D.

New Orleans, Louisiana

Graduated from the University of Nebraska College of Medicine in 1939. Currently Professor and Chairman, Division of Orthopaedic Surgery, Tulane University School of Medicine; Orthopedist-in-Chief, Charity Hospital; and Associate Editor, "Journal of Bone and Joint Surgery." Has authored numerous publications. Serves on Committee on Bio-mechanics and Implants of the American Academy of Orthopaedic Surgeons. Served in the U.S. Navy and his avocation is photography.



## Technical Exhibitors

Abbott Laboratories, North Chicago, Illinois

Blue Cross-Blue Shield, Omaha, Nebraska

Ciba Pharmaceutical Products, Summit, New Jersey

Coca-Cola Company, Atlanta, Georgia

Des Moines Flying Service and Gregory Aviation,  
Des Moines, Iowa

Dictaphone Corporation, Omaha, Nebraska

Donley Medical Supply Company, Lincoln, Nebraska

Dorsey Laboratories, Lincoln, Nebraska

Encyclopaedia Britannica, Minneapolis, Minnesota

Great Books of the Western World, Chicago, Illinois

Hugo Heyn Company, Omaha, Nebraska

International Business Machines, Lincoln, Nebraska

Marion Laboratories, Kansas City, Missouri

Mead Johnson Laboratories, Evansville, Indiana

Medical Protective Company, Fort Wayne, Indiana

Medco Products Company, Inc., Tulsa, Oklahoma

Pfizer Laboratories, New York, New York

Physicians & Hospitals Supply Company, Minne-  
apolis, Minnesota

Professional Credit Control, Inc., Lincoln, Nebraska

A. H. Robins Company, Richmond, Virginia

Roche Laboratories, Nutley, New Jersey

Sandoz Pharmaceuticals, Hanover, New Jersey

W. B. Saunders Company, Philadelphia, Pennsylvania

Schering Corporation, Union, New Jersey

G. D. Searle & Company, Chicago, Illinois

Siemens Medical of America, Inc., Waterloo, Iowa

E. R. Squibb & Sons, New York, New York

Ulmer Pharmacal Company, Minneapolis, Minnesota

Upjohn Company, Kalamazoo, Michigan

Warren-Teed Products Company, Columbus, Ohio

Xerox Corporation, Omaha, Nebraska

# CONDENSED SCHEDULE OF PROGRAM

MONDAY, APRIL 26

## Morning

9:00 House of Delegates, West Room

## Sportsman's Day

## Afternoon

11:00 Golf Tournament, Omaha Country Club

1:30 Trapshoot, Omaha Country Club

TUESDAY, APRIL 27

## Morning

8:30 Registration, Mezzanine

10:00-10:40

Opening Ceremonies, Ballroom

Presidential Address

Installation of President

10:40 View the Exhibits

11:00 Keynote Speech, Ballroom

## Afternoon

12:00 Noon Luncheon, Ballroom

WEDNESDAY, APRIL 28

## Morning

8:00 House of Delegates, Sheraton South

8:00-9:00

Postgraduate Courses:.\*  
Ob-Gyn, Sheraton North  
Otolaryngology, Regal Room

8:30 Registration, Mezzanine

9:00 Board of Councilors, Sheraton South

9:00-10:30

Genetics Seminar, Ballroom  
View the Exhibits

10:30

11:00-12:00

Lectures:  
Trauma, Ballroom  
Medicine, Sheraton North

2:30-3:30

Lectures:

Surgery, Ballroom

Ob-Gyn, Sheraton North

3:30 View the Exhibits

4:00 Board of Councilors, Sheraton South

4:00-5:00

Lectures:

Medicine, Ballroom

Pediatrics, Sheraton North

5:00 Seminars (workshops)

Medicine, Regal Room

Surgery, Forum Room

Pediatrics, Colonial Room

Ob-Gyn, Sheraton North

7:30 Fun Night, Happy Hollow Country Club

THURSDAY, APRIL 29

## Morning

8:00 House of Delegates, Sheraton South

8:00-9:00

Postgraduate Courses:.\*  
Pediatrics, Regal Room  
Orthopedic Surgery, Forum Room

8:30 Registration, Mezzanine

9:00 Board of Councilors, Sheraton South

9:30-10:30

Symposium on Infection, Ballroom

11:00-12:30

Program on Medicine and Religion, Music Hall of the Omaha Civic Auditorium

(The Auditorium is located 2 blocks north of the Hotel)



## Officers

### President

Willis D. Wright, M.D. -----Omaha

### Vice President

R. C. Reeder, M.D. -----Fremont

### Secretary-Treasurer

Horace V. Munger, M.D. -----Lincoln

### Executive Secretary

Kenneth Neff -----Lincoln

### Board of Councilors

| District                                    | Term Expires |
|---------------------------------------------|--------------|
| 1. Leroy W. Lee, M.D., Omaha -----          | 1966         |
| 1. John T. McGreer, Jr., M.D., Lincoln----- | 1966         |
| 3. W. W. Waddell, M.D., Beatrice -----      | 1966         |
| 4. George B. Salter, M.D., Norfolk -----    | 1966         |
| 5. H. D. Kuper, M.D., Columbus -----        | 1967         |
| 6. C. L. Anderson, M.D., Stromsburg -----   | 1967         |
| 7. C. F. Ashby, M.D., Geneva -----          | 1967         |
| 8. Rex Wilson, M.D., O'Neill -----          | 1967         |
| 9. Dan A. Nye, M.D., Kearney -----          | 1965         |
| 10. L. S. McNeill, M.D., Hastings -----     | 1965         |
| 11. Max M. Raines, M.D., North Platte ----- | 1965         |
| 12. C. J. Cornelius, M.D., Sidney -----     | 1965         |

### Chairman, Board of Councilors

W. W. Waddell, M.D. -----Beatrice

### Speaker, House of Delegates

Wm. E. Nutzman, M.D., Kearney ----- 1965

### Vice Speaker, House of Delegates

Harry W. McFadden, Jr., M.D., Omaha----- 1965

### Delegates to A.M.A.

Earl F. Leininger, M.D., McCook ----- 1965  
John R. Schenken, M.D., Omaha ----- 1966

### Alternate Delegates to A.M.A.

W. C. Kenner, M.D., Nebraska City ----- 1965  
Harold S. Morgan, M.D., Lincoln ----- 1966

### Board of Trustees

M. E. Grier, M.D., Chairman, Omaha ----- 1965  
H. V. Nuss, M.D., Sutton ----- 1968  
C. N. Sorensen, M.D., Scottsbluff ----- 1967  
J. M. Woodward, M.D., Lincoln ----- 1966  
Horace V. Munger, M.D., Lincoln

## PROGRAM

### Nebraska State Medical Association 97th Annual Session

TUESDAY, APRIL 27, 1965

8:30 Exhibits Open

9:30 Film

### OPENING CEREMONIES — Ballroom

R. F. Sievers, M.D., Blair, Presiding

10:00 Welcome

—R. E. Garlinghouse, M.D., President, Lincoln

10:05 Invocation

—Father Dale C. Rogers, Chaplain, Bishop Clarkson Hospital

10:10 Presidential Address

—R. E. Garlinghouse, M.D., Lincoln

10:20 Installation of Incoming President

—Willis D. Wright, M.D., Omaha

10:30 Necrology

—George B. Salter, M.D., Norfolk

10:40 VISIT THE EXHIBITS

11:00 Keynote Address

"Where Do We Go From Here?"

—Donovan F. Ward, M.D., Dubuque, Iowa  
President, American Medical Association

12:00 Noon Luncheon, Ballroom

—Willis D. Wright, M.D., President, Presiding

—Honorable Carl T. Curtis, United States Senate

VISIT THE EXHIBITS

## PROGRAM

TUESDAY AFTERNOON, APRIL 27, 1965

### LECTURES — SECTION A

#### Ballroom

#### SURGERY LECTURES

—John W. Porter, M.D., Beatrice, Moderator

2:30 "Retroperitoneal Tumors"  
—Isidore Cohn, Jr., M.D., New Orleans, Louisiana

2:50 "Tracheostomy—Indications and Techniques"  
—Paul C. Samson, M.D., Oakland, California

3:10 "Diverticulitis of the Colon"  
—Claude E. Welch, M.D., Boston, Massachusetts

3:30 VISIT THE EXHIBITS

#### MEDICINE LECTURES

—Harold N. Neu, M.D., Omaha, Moderator

4:00 "Examination of the Painful Shoulder"  
—Paul J. Bilka, M.D., Minneapolis, Minnesota

4:20 "The Diagnosis and Management of Bronchitis and Emphysema"  
—David E. Dines, M.D., Rochester, Minnesota

4:40 "Professional Men; Their Health and Health Care Habits"  
—C. John Tupper, M.D., Ann Arbor, Michigan

VISIT THE EXHIBITS

5:00 SEMINARS FOR ABOVE LECTURES  
Surgery, Forum Room  
—John W. Porter, M.D., Beatrice, Moderator  
Drs. Cohn, Samson and Welch

Medicine, Regal Room  
—Harold N. Neu, M.D., Omaha, Moderator  
Drs. Bilka, Dines and Tupper

— FUN NIGHT —

## PROGRAM

TUESDAY AFTERNOON, APRIL 27, 1965

### LECTURES — SECTION B

#### Sheraton North

#### OBSTETRICS AND GYNECOLOGY LECTURES

—Leon S. McGoogan, M.D., Omaha, Moderator

2:30 "The Enigma of the Pelvis"  
—Frederick J. Hofmeister, M.D., Milwaukee, Wisconsin

2:50 "Management of Dysfunctional Bleeding"  
—S. Jan Behrman, M.D., Ann Arbor, Michigan

3:10 "Current Status of Contraceptives"  
—Harry K. Waddington, M.D., Chicago, Illinois

3:30 VISIT THE EXHIBITS

#### PEDIATRICS LECTURES

—George E. Robertson, M.D., Omaha, Moderator

4:00 "Importance of Minor Diagnostic Clues"  
—Theodore R. Pfundt, M.D., Houston, Texas

4:20 "The Epidemiology of Poisoning in Children"  
—George H. Lowrey, M.D., Ann Arbor, Michigan

4:40 "The Treatment of the Severe Erythroblastic Infant and the Prevention of Rh Immunization"  
—Doris A. Howell, M.D., Philadelphia, Pennsylvania

VISIT THE EXHIBITS

5:00 SEMINARS FOR ABOVE LECTURES  
Obstetrics and Gynecology, Sheraton North  
—Leon S. McGoogan, M.D., Omaha, Moderator  
Drs. Hofmeister, Behrman and Waddington

Pediatrics, Colonial Room  
—George E. Robertson, M.D., Omaha, Moderator  
Drs. Pfundt, Lowrey and Howell

— FUN NIGHT —

## PROGRAM

WEDNESDAY MORNING, APRIL 28, 1965

- 8:00 Course in Otolaryngology, Regal Room  
—Thomas T. Smith, M.D., Omaha, Moderator  
(Continental Breakfast — \$1.00 per participant, limit of 25)  
“Management of Chronic Sinusitis”  
—James B. McBean, M.D., Rochester, Minnesota

### GENERAL SESSION

#### Ballroom

#### “WHAT’S NEW IN GENETICS”

—John M. Thomas, M.D., Omaha, Moderator

- 9:00 “The Clinical Significance of Research on Human Chromosomes”  
—James D. Eisen, Ph.D., Omaha, Nebraska
- 9:30 “New Studies on Meiotic Division in the Human Egg”  
—Edith L. Potter, M.D., Chicago, Illinois
- 10:00 “Newer Clinical Entities”  
—Theodore R. Pfundt, M.D., Houston, Texas

10:30 VIEW THE EXHIBITS

### LECTURES — SECTION A

#### Ballroom

#### TRAUMA LECTURES

—Carlyle E. Wilson, M.D., Omaha, Moderator

- 11:00 “Problems in the Management of Ocular Trauma”  
—George S. Tyner, M.D., Denver, Colorado
- 11:20 “Blow-Out Fractures of the Orbit”  
—James B. McBean, M.D., Rochester, Minnesota
- 11:40 “Head Injuries”  
—Ross H. Miller, M.D., Rochester, Minnesota

VISIT THE EXHIBITS

- 12:30 Noon Luncheon, “Your Association Reports”  
—R. E. Garlinghouse, M.D., Lincoln, Presiding

## PROGRAM

WEDNESDAY MORNING, APRIL 28, 1965

- 8:00 Course in Obstetrics and Gynecology, Sheraton North  
—Russell L. Gorthey, M.D., Lincoln, Moderator  
(Continental Breakfast — \$1.00 per participant, limit of 25)  
“Cesarean Section, Always Cesarean Section?”  
—Harry K. Waddington, M.D., Chicago, Illinois

#### “WHAT’S NEW IN GENETICS”

(See Opposite Page)

10:30 VISIT THE EXHIBITS

### LECTURES — SECTION B

#### Sheraton North

#### MEDICINE LECTURES

—Robert L. Grissom, M.D., Omaha, Moderator

- 11:00 “Newer Advances in the Management of Rheumatoid Arthritis”  
—Paul J. Bilka, M.D., Minneapolis, Minnesota
- 11:20 “The Recognition and Treatment of Respiratory Acidosis”  
—David E. Dines, M.D., Rochester, Minnesota
- 11:40 “Progress in Medicine; A Look Ahead”  
—C. John Tupper, M.D., Ann Arbor, Michigan

VISIT THE EXHIBITS

- 12:30 Noon Luncheon, “Your Association Reports”  
—R. E. Garlinghouse, M.D., Lincoln, Presiding



## PROGRAM

WEDNESDAY AFTERNOON, APRIL 28, 1965

### LECTURES — SECTION A

Ballroom

#### SURGERY LECTURES

—Fletcher A. Miller, M.D., Omaha, Moderator

- 2:00 "Antibiotics and Peritonitis"  
—Isidore Cohn, Jr., M.D., New Orleans, Louisiana
- 2:20 "Methods of Increasing the Safety of Operations on the Stomach"  
—Claude E. Welch, M.D., Boston, Massachusetts
- 2:40 "Surgical Treatment of Cerebrospinal Fluid Rhinorrhea"  
—Ross H. Miller, M.D., Rochester, Minnesota

3:00 VISIT THE EXHIBITS

#### TRAUMA LECTURES

—John G. Yost, M.D., Hastings, Moderator

- 3:30 "The Care of the Patient With Multiple Injuries"  
—Jack Wickstrom, M.D., New Orleans, Louisiana
- 3:50 "Traumatic Injuries of the Urinary Bladder"  
—Edward M. Cannon, M.D., St. Louis, Missouri
- 4:10 "Immediate Care of Thoracic Injuries"  
—Paul C. Samson, M.D., Oakland, California

VISIT THE EXHIBITS

#### 4:30 SEMINARS FOR ABOVE LECTURES

Surgery, Colonial Room

—Fletcher A. Miller, M.D., Omaha, Moderator  
Drs. Cohn, Welch and Miller

Trauma, Forum Room

—John G. Yost, M.D., Hastings, Moderator  
Drs. McBean, Wickstrom, Cannon, Samson and Tyner

6:00 Social Hour, Sheraton North

#### 7:00 Annual Banquet, Ballroom

—Donald J. Bucholz, M.D., President, Omaha-Douglas County Medical Society, Presiding

Boys Town Choir

Presentation of 50-Year Pins

"Football Anecdotes"

—Mr. Bob Devaney, Head Football Coach, University of Nebraska

## PROGRAM

WEDNESDAY AFTERNOON, APRIL 28, 1965

### LECTURES — SECTION B

Sheraton North

#### PEDIATRICS LECTURES

—Robert E. Murphy, M.D., Omaha, Moderator

- 2:00 "Effects of Drugs on the Fetus"  
—Edith L. Potter, M.D., Chicago, Illinois
- 2:20 "Common Problems in the Treatment of Juvenile Diabetes"  
—George H. Lowrey, M.D., Ann Arbor, Michigan
- 2:40 "Neonatal Hemodynamics"  
—Doris A. Howell, M.D., Philadelphia, Pennsylvania

3:00 VISIT THE EXHIBITS

#### OBSTETRICS AND GYNECOLOGY LECTURES

—Harold S. Morgan, M.D., Lincoln, Moderator

- 3:30 "The Significance of Vaginal Bleeding"  
—Frederick J. Hofmeister, M.D., Milwaukee, Wisconsin
- 3:50 "Maternal Age and Parity on Pregnancy Outcome"  
—S. Jan Berman, M.D., Ann Arbor, Michigan
- 4:10 "Cesarean Sections"  
—Harry K. Waddington, M.D., Chicago, Illinois

VISIT THE EXHIBITS

#### 4:30 SEMINARS FOR ABOVE LECTURES

Medicine, Regal Room

—Robert L. Grissom, M.D., Omaha, Moderator  
Drs. Bilka and Dines

Pediatrics — Obstetrics and Gynecology, Sheraton South

—Harold S. Morgan, M.D., Lincoln, Moderator  
Drs. Potter, Lowrey, Howell, Hofmeister, Behrman and Waddington

6:00 Social Hour, Sheraton North

#### 7:00 Annual Banquet, Ballroom

—Donald J. Bucholz, M.D., President, Omaha-Douglas County Medical Society, Presiding

Boys Town Choir

Presentation of 50-Year Pins

"Football Anecdotes"

—Mr. Bob Devaney, Head Football Coach, University of Nebraska

## PROGRAM

THURSDAY MORNING, APRIL 29, 1965

8:00 Course in Pediatrics, Regal Room  
—George E. Stafford, M.D., Lincoln, Moderator  
(Continental Breakfast — \$1.00 per participant, limit of 25)  
“Growth and Development in Children in Preventive Pediatrics”  
—Theodore R. Pfundt, M.D., Houston, Texas

8:00 Course in Orthopedic Surgery, Forum Room  
—Dwight Burney, Jr., M.D., Omaha, Moderator  
(Continental Breakfast — \$1.00 per participant, limit of 25)  
“The Management of the Painful Shoulder”  
—Jack Wickstrom, M.D., New Orleans, Louisiana

9:00 VISIT THE EXHIBITS

SYMPOSIUM ON INFECTION — Ballroom  
—Harry W. McFadden, Omaha, Moderator

9:30 “Current Innovations in Managing Skeletal Infections”  
—Jack Wickstrom, M.D., New Orleans, Louisiana

9:50 “Infections of the Lower Urinary Tract”  
—Edward M. Cannon, M.D., St. Louis, Missouri

10:10 “Current Concepts in the Management of Ocular Infections”  
—George S. Tyner, M.D., Denver, Colorado

10:30 VISIT THE EXHIBITS

MEDICINE AND RELIGION\* — Omaha Civic Auditorium

11:00 “The Relationship of the Doctor, Minister and Patient in Illness”  
—Horace K. Giffen, M.D., Omaha, Moderator  
—Rev. Dr. Paul B. McCleave, Director, Department of Medicine and Religion, American Medical Association  
—Rex E. Kenyon, M.D., Assistant Professor of Pathology, University of Oklahoma School of Medicine, Oklahoma City, Oklahoma

12:30 Meeting Adjourned

\*The Special Program on Medicine and Religion will be held in the Music Hall of the Omaha Civic Auditorium, located two blocks north of the Sheraton-Fontenelle Hotel.

## Acknowledgements

The Nebraska State Medical Association wishes to take this opportunity to recognize and express its appreciation for the grants received from the following organizations:

Nebraska Division, American Cancer Society  
Eli Lilly and Company  
(Grant given in lieu of exhibit).  
Nebraska Tuberculosis Association  
National Foundation

## Scientific Sessions Committee

M. M. Musselman, M.D., Chairman ----- Omaha  
C. R. Brott, M.D. ----- Beatrice  
Bruce F. Claussen, M.D. ----- North Platte  
R. O. Garlinghouse, M.D. ----- Lincoln  
Russell L. Gorthey, M.D. ----- Lincoln  
Harold N. Neu, M.D. ----- Omaha  
H. V. Munger, M.D. ----- Lincoln

## Announcements

### House of Delegates

1st Session: Monday, April 26, 1965, 9:00 a.m., West Room  
2nd Session: Wednesday, April 28, 1965, 8:00 a.m., Sheraton South  
3rd Session: Thursday, April 29, 1965, 8:00 a.m., Sheraton South

### Board of Councilors

1st Session: Tuesday, April 27, 1965, 4:00 p.m., Sheraton South  
2nd Session: Wednesday, April 28, 1965, 9:00 a.m., Sheraton South  
3rd Session: Thursday, April 29, 1965, 9:00 a.m., Sheraton South

### Board of Trustees

Wednesday, April 28, 1965, 3:45 p.m., Sheraton South

## Scientific Film Program

West Room

TUESDAY, APRIL 27, 1965

### Morning Program

- 9:00 "Hope in Peru"  
—A.M.A.
- 9:30 "Doctor and the Law — Appraisal of Competency"  
—Nebraska Psychiatric Institute
- 10:00 "Marrow Puncture"  
—Imperial Chemical
- 10:30 "Blood Transfusion"  
—Imperial Chemical

### Afternoon Program

- 1:00 "Enovid — A Documentary of 10 Years Research in the Service of Medicine"  
—C. R. Garcia, M.D.
- 1:30 "Plan Ahead for Mental Health"  
—Nebraska Psychiatric Institute
- 2:00 "Transvaginal Regional Anesthesia in Obstetrics"  
—Max S. Sadove, M.D., and Alfred J. Kobak, M.D.
- 2:30 "Medical Use of Hypnosis"  
—Robert Anderson
- 3:00 "Operative Cholangiography and Its Indications"  
—Richard E. Gardner, M.D.
- 3:30 "Vaginal Hysterectomy, a Simplified Technique"  
—Robert H. Barter, M.D.
- 4:00 "Pyloric Stenosis"  
—William Snyder, M.D.

WEDNESDAY, APRIL 28, 1965

### Morning Program

- 8:30 "Plan Ahead for Mental Health"  
—Nebraska Psychiatric Institute
- 9:00 "Complications of Acute Appendicitis"  
—S. W. Moore, M.D.
- 9:30 "Peptic Ulcer — Its Etiology and Therapy"  
—A. H. Robins Company

- 10:00 "Topical Action of Salicylates in Gastrointestinal Erosion and Hemorrhage"  
—J. L. Roth, M.D.

- 10:30 "Right Hemicolectomy for Carcinoma"  
—Charles D. Branch, M.D.

- 11:00 "Why Johnny Bleeds — Collaborative Diagnosis of a Hematologic Problem"  
—John B. Miale, M.D., and Wm. Dolan, M.D.

- 11:30 "Recurrent Inguinal Hernia Repair With Fascial Sutures"  
—E. Lee Strohl, M.D.

### Afternoon Program

- 1:00 "Neurological Examination of the Newborn"  
—Richard S. Paine, M.D.
- 1:30 "Plan Ahead for Mental Health"  
—Nebraska Psychiatric Institute
- 2:00 "Resuscitation of the Newborn"  
—Smith Kline & French Laboratories
- 2:30 "Diagnosis and Management of Eye Injuries"  
—William Havener, M.D.
- 3:00 "Visual Method of Treatment of Supracondylar Fractures of the Humerus"  
—Lyman Smith, M.D.
- 3:30 "Surgery of the Forefoot in Rheumatoid Arthritis"  
—Mack L. Clayton, M.D., John D. Leidholt, M.D., and Charley J. Smith, M.D.
- 4:00 "Anorectal and Sigmoidoscopic Examination With Differential Diagnosis"  
—Malcolm R. Hill, M.D.

THURSDAY, APRIL 29, 1965

### Morning Program

- 9:00 "PKU Mental Deficiency Can Be Prevented"  
—Harry A. Waisman, M.D.
- 9:30 "Stroke — Early Restorative Measures in Your Hospital"  
—Edward E. Gordon, M.D.
- 10:00 "Injuries to the Hands and Face, Primary Reconstruction"  
—Norman A. Christensen, M.D.
- 11:00 "Emotional Factors in General Practice"  
—Geigy Pharmaceuticals



## Woman's Auxiliary



**MRS. JOHN A.  
BROWN III**

Lincoln, Nebraska  
President, 1964-1965

**MRS. J. WHITNEY  
KELLEY**

Omaha, Nebraska  
President, 1965-1966



**MRS. VIRGIL RAY  
FORESTER**

Oklahoma City, Oklahoma  
Honored Guest Speaker  
Woman's Auxiliary  
National Chairman  
Committee on Safety  
Woman's Auxiliary  
to the  
American Medical  
Association



## Woman's Auxiliary

### FORTIETH ANNUAL MEETING OF THE WOMAN'S AUXILIARY TO THE NEBRASKA STATE MEDICAL ASSOCIATION

A registration desk will be open on the Mezzanine of the Sheraton-Fontenelle Hotel on Tuesday, April 27, and on Wednesday, April 28, until 12 p.m.

#### CONVENTION COMMITTEES

##### General Chairman—

Mrs. James F. Kelly, Jr.

##### Arrangements—

Mrs. Arnold Lempka  
Mrs. J. B. Christensen

##### Fashion Coordinators—

Mrs. Barney B. Rees  
Mrs. Perry Williams

##### Hospitality—

Wives of Physicians from Nebraska and  
Creighton Schools of Medicine

##### Registration and Tickets—

Mrs. Richard Johnson

##### Reservations—

Mrs. Harry McFadden

##### Transportation—

Mrs. John Dewey

##### Publicity—

Mrs. John Christlieb

##### Hostess Auxiliary

Douglas County Medical Auxiliary

A cordial invitation is extended to all doctors' wives of Nebraska, whether or not you are an Auxiliary member.

#### AUXILIARY PLEDGE

I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation, and ever sustain its high ideals.

#### WHO IS EXPECTED TO ATTEND

Officers  
Directors  
Chairmen of Committees  
Presidents of County Auxiliaries  
District Councilors

New officers and chairmen, either on the state or local levels, will benefit from attending the sessions.

## Woman's Auxiliary

### PROGRAM

**TUESDAY, APRIL 27, 1965**

- 8:00 Registration, Mezzanine, Sheraton-Fontenelle Hotel
- 8:15 Pre-Convention Executive Board Meeting, Sheraton North  
Mrs. John A. Brown III, Presiding  
Reports of Officers and State Chairmen  
Election of Officers
- 11:00 Keynote Address, Ballroom  
Donovan Ward, M.D., President, American Medical Association
- 12:00 Combined Auxiliary and Association Luncheon, Ballroom  
Guest Speaker: The Honorable Carl T. Curtis  
Presentation of AMA-ERF Checks  
Tickets available at Ballroom
- 2:30 Annual Business Meeting, Forum Room  
Mrs. John A. Brown III, Presiding  
Reports of County Presidents  
Memorial Service  
Installation of New Officers  
FUN NIGHT (Omaha-Douglas County Medical Society)  
Happy Hollow Country Club, 1701 South 105th Street
- 7:30 Social Hour
- 8:30 Dinner  
Dancing till 11:30

**WEDNESDAY, APRIL 28, 1965**

- 12:30 Luncheon, Omaha Country Club, 69th and Country Club Road  
Tickets and transportation information to the Country Club available at the Registration Desk at the Hotel.  
Mrs. Virgil Ray Forester, Oklahoma City, Oklahoma, National Safety Chairman of the Woman's Auxiliary to the American Medical Association  
Fashion Show
- 6:00 Social Hour, Sheraton North  
(To honor the President and President-elect of the Nebraska State Medical Association and the Woman's Auxiliary).
- 7:00 Annual Banquet, Ballroom  
Boys Town Choir  
Presentation of Fifty Year Pins  
Guest Speaker: Coach Bob Devaney, University of Nebraska

**THURSDAY, APRIL 29, 1965**

- 8:00 Post-Convention Executive Board Meeting, Sheraton North  
Mrs. J. Whitney Kelley, Presiding  
No-Host Breakfast
- 11:00 Medicine and Religion Panel and Program, Music Hall of Omaha Civic Auditorium  
The Rev. Dr. Paul B. McCleave, Director, Department of Medicine and Religion, A.M.A.  
Film: "The One Who Heals"
- 12:30 Adjourn Meeting

## Announcements

### Lederle Grants for Study of Geriatrics—

The American Geriatrics Society recently announced in New York the renewal of three \$1,800 grants to stimulate more extensive study of the medical problems of the aging by resident physicians.

Known as the Lederle Residency Supplements, the grants will be used to augment the salaries of residents interested in geriatrics while they continue their medical education.

Funds are donated by Lederle Laboratories, Division of American Cyanamid Company, to cover the period, July, 1965 to June, 1966.

In announcing the renewal, Dr. Brock E. Brush, President of the American Geriatrics Society, noted that since the grants were inaugurated in 1962, the need for further study in geriatrics has become more urgent as the number of the aged steadily increases. "With better understanding," he said, "we can learn to prevent many of the diseases normally associated with aging and give, not just time, but healthy, meaningful years to older people."

Lederle Medical Director, Benjamin Carey, MD, said that the grant renewal was made as part of the company's long-standing program of research into the geriatrics field. "The studies conducted by the grantees," he said, "will add to the store of knowledge being built up in our own labs on such diseases as arthritis, rheumatism, cancer, and mental or cardiovascular disorders, some of the greatest health threats to older people."

Application for the Lederle Residency Supplements should be addressed to the Chairman, Fellowship Committee, American Geriatrics Society, 10 Columbus Circle, New York 19, New York. Deadline for applications is May 1, 1965.

Announcement of the grantees will be made at the Society's annual meeting in New York City in June.

### A Recent Publication—

Copies of the proceedings for the First National Conference of Professional Nurses

and Physicians titled "Medical and Nursing Practice in a Changing World" have just recently been published and are available for \$1.50 each.

Nurses may purchase copies from the American Nurses' Association, 10 Columbus Circle, New York 19, New York; physicians from the Department of Nursing, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

#### Two Cash Prizes Offered—

The American Society of Oral Surgeons wishes to announce that two cash awards (first prize \$300.00 — second prize \$200.00) will be presented at the Forty-seventh Annual Meeting in Denver, November 2-6, 1965. These awards will be for superior, original, unpublished manuscripts concerning any phase of research related to oral surgery completed during the current year.

Individuals interested in these competitive awards should write to the American Society of Oral Surgeons, 919 North Michigan Avenue, Chicago 11, for further information.

## Human Interest Tales

Doctor A. J. Griot has retired after forty-six years of practice in Chadron.

Doctor Shirley Claassen has announced the opening of her office in Bristow.

Dr. and Mrs. R. P. Carrall of Laurel spent the month of February in California.

Doctor Maynard Wood, Lincoln, has taken office as Bryan Memorial Hospital's Chief of Staff for 1965.

Doctor Paul Goetowski, Lincoln, was named Chief of Staff of St. Elizabeth Hospital at the annual staff meeting.

Doctors R. R. Landers and Joseph S. Pennepacker, Jr., Omaha, have been named Diplomates of the American Board of Pathology.

Doctor R. J. Wyrens, Omaha, was re-elected President of the Nebraska Society of Internal Medicine at the group's February meeting.

Doctor Arden Bonebrake, Nebraska City, talked on children's diseases at a meeting of the Kearney-Sixth Street PTA held in February.

Doctor B. W. Pyle, Gothenburg, attended the General Practice Review held at the University of Colorado Medical Center during January.

Doctor F. H. Hathaway, Lincoln, was elected Director of Nebraska Blue Cross Hospital Service at the annual meeting at Omaha in February.

Doctor Robert Rosenlof, Kearney, spoke on diseases of the aged at a meeting of Red Cross Gray Ladies held at the Gibbon Presbyterian Church.

Doctor Keith Sehnert, Lincoln, was elected President of the Nebraska Chapter of the American Medical Writers Association at the group's meeting held in January.

Doctor Harlan L. Papenfuss, Lincoln, and Doctor Robert C. Therien, Omaha, were elected Directors of Nebraska Blue Shield at the annual board meeting held at Omaha in January.

## News and Views

### Smith Kline & French Grant Foreign Fellowships to Medical Students—

Twenty-eight junior and senior U.S. medical students have been awarded Foreign Fellowships which will enable them to obtain supervised medical experience in relatively underdeveloped areas of the world, the Association of American Medical Colleges announced recently.

The Fellowships are made possible by a grant from Smith Kline & French Laboratories, Philadelphia pharmaceutical firm. With the current selection, the Association, during six years, has awarded a total of 180 Fellowships for work and study in 42 countries of Africa, Asia, and Latin America.

The primary objective of the Fellowships is to provide students an opportunity to benefit from unusual clinical experiences and familiarize themselves with medical, cultural,



and social problems different from their own. They will be stationed in mission hospitals and outpost medical facilities.

#### Enzyme's Action in Dissolving Blood Clots Is Being Studied—

The enzyme urokinase, which is believed to have great potential value in the treatment of heart attacks and stroke, has been crystallized and is now available in pure form.

This important scientific achievement, climaxing over a decade of effort in this country and Europe, is announced for the first time in the February 19th issue of *Science*, the journal published by the American Association for the Advancement of Science.

Urokinase, which is found in human urine together with many other substances, must be purified extensively before injection into a patient else serious side reactions are likely to follow. Testing it in humans had awaited the time it could be made in highly purified form. Removing some of the more tenacious impurities has long frustrated biochemists. The crystallization of urokinase means that the last of the remaining impurities has been removed.

The feat was accomplished after 5 years of intensive work at the Sterling-Winthrop Research Institute, Rensselaer, NY, by Dr. Alex Lesuk, assisted by Dr. Louis Terminiello and Miss Janet H. Traver. The Institute is the research center of Sterling Drug Inc. Dr. Lesuk's achievement was described by the Institute's director, Dr. C. M. Suter, as "a significant scientific advance which may well rank in importance with the crystallization of vitamin B<sub>12</sub> and insulin."

#### Treatment of Gas Gangrene—

According to PMC's *Spirit*, (Febr. 1965) a patient dying of gas gangrene was put into the hyperbaric chamber and treated with oxygen under increased atmospheric pressure. He recovered.

The patient was given oxygen at three times atmospheric pressure for one hour

every eight hours. Recovery began promptly and has been complete. Apparently this organism cannot survive if enough oxygen is supplied the tissues.

#### The Loafer's Heart—

According to a recent release from the AMA, the "athlete's heart" is a myth. In later years such a heart does not become a handicap. It is the heart of the loafer that is unprepared for additional strain and must be trained with great care. (Health and Safety Tips from the AMA).

#### Alcoholism Increasing—

Alcoholics, particularly those with the most severe forms of the disease, are increasing among State mental hospital admissions, according to Dr. Stanley F. Yolles, Director of the National Institute of Mental Health.

A study by the Institute's Office of Biometry, Public Health Service, U.S. Department of Health, Education, and Welfare, reveals that one in seven newly admitted patients is an alcoholic, an 18 per cent rise in 10 years. In nine states, disorders associated with alcoholism lead all other diagnoses in mental hospital admissions.

Recent figures analyzed by Ben Z. Locke, NIMH statistician, show a startling rise in the number of alcoholics diagnosed with "chronic brain syndrome associated with alcoholism," the most severe and hopeless of the 3 classifications of the disease. Patients in this group suffer permanent and irreversible destruction of the tissues of the brain. The damage probably results from metabolic or nutritional defects caused by prolonged use of alcohol. (Release from U.S. Dept. of HEW)

#### Biochemistry Seminar—

Dr. E. A. Zeller, professor of biochemistry at Northwestern University Medical School, was the featured speaker at a biochemistry seminar for clinicians and physicians Tuesday, Feb. 23, at Creighton University.

Dr. Zeller spoke at 8 p.m. in the Eppley

Lecture Hall, on the chemistry, physiology and pathology of mono-amine oxidase, an enzyme which oxidizes aminocompounds. A native of Switzerland, Dr. Zeller has conducted extensive research in several fields of enzymology, much of it devoted to the biochemistry of tuberculosis and of the nervous system.

His publications include studies of metabolism and enzymology of the eye, metabolism of mycobacteria and the composition and action of snake venom. In his talk, he explored the possibility that mono-amine oxidase is involved in the biochemistry of mental disease.

The seminar was one of six at Creighton this semester sponsored by the program of postgraduate medical education of Merck, Sharp and Dohme.

#### Hospital Planning Curbs Costs

Alarmed by soaring patient charges, more than 50 US communities have established area planning groups whose main aim is to hold down hospital costs by blocking the construction of unneeded facilities. The planning groups, which numbered only about ten as recently as four years ago, also pass hospitals to improve the quality of medical care and to convert unneeded services to those that are in demand, according to an article in *The Wall Street Journal*.

Such planning bodies are usually composed of business men, labor representatives, hospital officials, doctors and other civic leaders. Their power, since they are voluntary organizations, generally stems from their ability to mobilize public opinion against hospitals that resist their guidance. Hospitals which ignore their advice often find that financing and public contributions are difficult to obtain. State and federal officials who disperse grants for hospital construction, are also inclined to listen to the opinions of groups organized to plan the orderly development of hospital facilities.

The rapid move to areawide hospital planning is said to reflect the swift rise in medical charges. It is stated that the operating cost of general short term hospitals in the

United States have climbed to \$38.91 a day per patient, in 1963, which is almost double the cost ten years ago. During this same period the consumer price index has risen only 16 per cent.

Shortly after World War II, there was a widespread shortage of hospital beds. There is probably still a national shortage of hospital beds but in many areas the demand for short-term "acute care" facilities has been satisfied. The groups reason that if the construction of unnecessary beds can be prevented, the community will be spared the financial burden, not only of their construction, but of their operation as reflected in hospital statements, and in the cost of hospital benefits insurance.

The activities of the Hospital Planning Council of metropolitan Chicago are described as an example of community planning. During the six years of operation, the Chicago Council has opposed some 100 hospital construction projects. Only one has been completed in the face of its opposition. That project, a new hospital, has since fallen on hard times according to the report.

Blue Cross has said to be lending its muscle to hospital planning by threatening not to sign a "participating" contract with a hospital which persists in unnecessary expansion. A Circuit Court in Michigan, in 1963, upheld the legal right of Blue Cross in the Court's jurisdiction, to withhold a participating contract from a particular hospital.

#### An Analysis of the AMA—

Washington prophets predict that the American Medical Association is about to suffer a traumatic political defeat with enactment of a "Medicare" plan for the aged. *The Wall Street Journal* in a review of the "AMA" proposes that when the Medicare battle has died away, the AMA will be found as the nation's largest medical organization which has not only survived adversity but has thrived on it. The expansion program, largely as a result of the Medicare fight, has caused the AMA to become not only one of the nation's most controversial professional organizations but also one of its most affluent and influential.



The analysis continues to indicate that whatever happens with regard to Medicare, the AMA has become an increasingly powerful force in the economics of medicine and public health. The Organization has maintained an effective lobbying effort and a surprisingly effective grass-roots pressure. It expresses an opinion each year on dozens of pieces of legislation.

The AMA is also beginning to take an active interest in social problems as evidenced by its recent endorsement of birth and population control. It is broadening its activities in the medical field in what has been admitted as an effort to repair damage to its "image." As an example of its increased scientific activity, is its determined effort to compete with the Food and Drug Administration in evaluating new drugs and describing drug hazards. Its activities range from the promotion of automobile seat belts, to medical testimony in court trials, to the accuracy of TV medical shows and the education of baby sitters.

The Organization will spend close to \$25 million for its activities this year, which is a sum more than double its spending of only five years ago. This budget is in comparison to the \$3 million annual budget of the American Bar Association and the \$10 million yearly budget of the National Education Association. The AFL-CIO is said to spend about \$9.7 million a year.

The American Medical Association is said to have little difficulty in financing its operations of \$25 million a year. About half of its income is attributed to advertising, largely of drugs, in its medical publications. Such advertising in 1963 provided some \$10 million. The dues of \$45 a year from its physician members provide more than \$7 million a year income.

#### Inhalers by Prescription—

Methamphetamine inhalers — sold for the relief of nasal congestion— will be restricted to the prescription list in the future because of widespread abuse, the Food and Drug Administration announced. The action is being taken because of increasing abuse of the products by persons who extract the ac-

tive ingredient from the inhaler "wick" and use it for the amphetamine-like effect.

The announcement was made in a policy statement published in the Federal Register. A previous policy statement published in February, 1959, placed similar inhalers containing amphetamine on the prescription list because of widespread abuse.

In 1959, only six users of methamphetamine were reported to FDA. Five cases were reported each year afterwards through 1962 when the figure jumped to 54 in 1963 and 153 in 1964. Reports of misuse have come from Colorado, Illinois, Iowa, Kentucky, Kansas, Missouri, Nebraska, Oklahoma, Texas and Indiana.

Amphetamine tablets are sold legally by prescription only but there is said to be a widespread bootleg traffic in them. They may contribute to highway accidents, to broken homes and to juvenile delinquency. Methamphetamine extracted from inhalers can produce the same results.

## Deaths

**BARTLETT** — W. C. Bartlett, MD, who had practiced medicine in Alma for more than 60 years, died January 22, 1965, in Lexington, Kentucky, at the age of 87. He graduated from Central Medical College in St. Joseph, Missouri, in 1904. Dr. Bartlett was honored for his service in the community and also for his civic work. He served in World War I attaining the rank of Captain in the United States Army Medical Corps.

**McGEE** — Harry E. McGee, Sr., MD, died at the age of 72, in Omaha, January 30, 1965. He practiced medicine in Omaha for more than 40 years. Dr. McGee graduated from the University of Nebraska College of Medicine in 1918 and was on the staff of several Omaha hospitals before retiring in 1959. He received a certificate of merit for his more than 25 years of practice at the Lutheran Hospital.





## Know Your Blue Shield Plan

### Test of Performance Results—

Blue Shield pays 89 per cent of the cost of doctors' services for members possessing its best group certificate according to the survey recently completed by the National Association of Blue Shield Plans which is located in Chicago and is the coordinator of all Blue Shield Plans in the United States, Canada, Puerto Rico, and Jamaica.

The Test of Performance Survey, the largest single study in the history of medical economics, showed Blue Shield's best group certificate, held by one out of four members, pays 90 per cent of medical care costs, 89 per cent of surgical costs, and 88 per cent of anesthesia costs. Blue Shield, according to the survey, pays 82 per cent of members' costs in its most widely held group certificate, which accounted for 40 per cent of the claims surveyed.

For all claims analyzed in the study, including all levels of individual and group contracts, Blue Shield pays 77 per cent of members' costs.

Fifty-four United States Blue Shield Plans, with an enrollment of nearly 42 million, participated in the survey. These Plans account for 83 per cent of Blue Shield's United States' membership.

The survey was limited to a sample of physician services in the areas of surgery, anesthesia, medical, and maternity. These areas account for about 89 per cent of the money paid by the Plans that participated in the survey, the only one of its kind ever held.

Over 470,000 questionnaires, selected in a scientifically drawn sample, were sent to physicians during a recent six-week period inquiring about their charges and Blue Shield's payments for selected services. Physicians returned better than 370,000 questionnaires, a response of nearly 80 per cent.

The size and scope of the survey plus the excellent participation, cooperation and re-

turn of the questionnaires by the doctors makes the Test of Performance Survey a truly significant and powerful study for physicians to use as their answer for the voluntary prepayment of medical care.

## The Woman's Auxiliary

### 40th Annual Meeting in April, 1965—

The State Medical Convention in April, 1965, marks the fortieth annual meeting of the Woman's Auxiliary to the Nebraska State Medical Association. A cordial invitation is extended to all doctors' wives in the state—whether or not you are an Auxiliary member.

Following are the highlights of the Auxiliary's activities for the three-day convention, April 27, 28 and 29, 1965, at the Fontenelle Hotel in Omaha, Nebraska. ALL meetings are open meetings; your Board urges ALL Auxiliary members to "sit in!"

### TUESDAY, APRIL 27

- 8:00 Registration Begins
- 8:15 Pre-Convention Executive Board Meeting  
Reports of Officers and State Chairmen  
Annual Election of Officers
- 11:00 Keynote Address, by Donovan Ward, MD,  
President of AMA
- 12:00 Combined Auxiliary and Association Luncheon  
Guest Speaker: The Honorable Carl T. Curtis  
Presentation of AMA-ERF Checks
- 2:30 Annual Business Meeting  
Reports of County Presidents  
Memorial Service  
Installation of New Officers
- FUN NIGHT —  
(Happy Hollow Country Club)
- 7:30 Social Hour
- 8:30 Dinner; Dancing until 11:30

### WEDNESDAY, APRIL 28

- 12:30 Luncheon, Omaha Country Club  
Fashion Show  
Guest Speaker: Mrs. Virgil Ray Forrester,  
Oklahoma City, Oklahoma, National Safety Chairman of the Woman's Auxiliary to the AMA
- 6:00 Social Hour (to honor the president and president-elect of the Nebraska State Medical Association and Woman's Auxiliary)

7:00 Annual Banquet  
Presentation of 50-Year Pins  
Boys Town Choir  
Guest Speaker: Coach Bob Devaney, University of Nebraska

#### THURSDAY, APRIL 29

8:00 Post-Convention Executive Board Meeting  
No-host Breakfast  
11:00 Medicine and Religion Program and Panel  
Film: "The One Who Heals"  
12:30 Adjourn Meeting

Attention is called to the officers, state chairmen, and county presidents, that their written 3-minute reports will be presented on Tuesday, April 27th.

May I personally urge that all necessary reports be submitted as early as possible, in order that your state organization can meet its deadlines with National.

Mrs. John A. Brown III,  
President.

#### Adams County—

The new officers for the Adams County Medical Auxiliary for 1965-1966 are: President, Mrs. Finn Lunde; Vice President, Mrs. George Welch; Secretary-Treasurer, Mrs. Don Kingsley, Jr.

On March 3rd, Dr. Charles Landgraf showed a movie, "A Cry for Help," which was filmed in Chicago and sponsored by the Los Angeles Society for the Prevention of Suicide.

Members of the auxiliary collected and packed surplus drug samples donated by the Adams County Medical Society. Nine barrels were shipped to Detroit for use of the International Health Activities Program. Mrs. Gerald Kuehn is chairman for this project.

In April, Mrs. Clyde Kleager will show a series of movies, "So You Are Growing Up," to young girls in Adams County.

Mrs. Charles Guildner is chairman of a group who are planning a Gourmet dinner to be held at the Hastings State Hospital in April. Proceeds from the dinner will go to AMA-ERF and NMF.

#### 1965 Convention, New York, June 20 to 24—

A most cordial invitation is extended to all Nebraska Medical Auxiliary members to attend the forty-second annual convention of the Woman's Auxiliary to the American Medical Association, in New York, June 20 to 24, 1965. Headquarters will be at the Americana Hotel on 7th Avenue and 52nd Street. Mrs. Leif G. Jensen and Mrs. Henry L. Fineberg of New York will be chairman and co-chairman of the local committee on arrangements.

Preconvention activities will start Saturday, June 19, for committees and officers. On Sunday, June 20, from four to six o'clock, the annual Tea and Fashion Show, honoring Mrs. William H. Evans, and Mrs. Richard A. Sutter, will be held. All members are cordially invited and urged to attend. Details will be announced at a later date. Reservations for rooms at the Americana Hotel, or any of the other hotels listed in the AMA News and JAMA, should be made on the official Auxiliary form in the March Bulletin (or request form from Headquarters office).

#### Woman's Auxiliary Convention to Highlight Service Programs—

(The following information comes to us from the AMA).

Chicago — Achievement awards for outstanding community service projects, a luncheon honoring leaders of national women's voluntary organizations and an address by Harold Russell, chairman of the President's Committee for Employment of the Handicapped, will be features of the 42nd annual convention of the Woman's Auxiliary to the American Medical Association.

Reports emphasizing the Auxiliary's community service activities in disaster preparedness, health career recruitment, mental health, international health, safety and rural health will also be given to nearly 2,000 physicians' wives attending the June 20-24 convention in New York. Headquarters for the meeting, which coincides with the AMA annual convention, will be the Americana Hotel.

The House of Delegates, the Auxiliary's



policy-making body, will convene Monday, June 21. At noon that day, representatives of 50 national women's voluntary groups will be honored at a luncheon.

On Sunday, June 20, the president, Mrs. William H. Evans, Youngstown, Ohio, and the president-elect, Mrs. Richard A. Sutter, St. Louis, Mo., will be guests of honor at a tea.

National Auxiliary past presidents will be special guests at Tuesday's luncheon. Dr. Donovan Ward, Dubuque, Ia., AMA president, will be the guest speaker. At that time, the Auxiliary's annual contribution to the AMA Education and Research Foundation will be announced. Last year's donation was \$307,318.

Mrs. Sutter will be installed as Auxiliary president at the concluding business session, Wednesday, June 23. Election and installation of other national officers will be held then.

A post-convention conference and planning session for 1965-66 is scheduled for Thursday, June 24. At that time, AMA Assistant Executive Vice President Ernest B. Howard, MD, will discuss principal actions of the AMA House of Delegates.

All members, their guests and guests of physicians attending the AMA annual convention are invited to participate in the general sessions and social functions of the Auxiliary. A special program is planned for teen-agers.

Local arrangements for the meetings are under the direction of Mrs. Leif G. Jensen, Staten Island, N.Y., chairman, and Mrs. Henry I. Fineberg, Fresh Meadows, N.Y., co-chairman.



DOCTOR — Please take each copy of your Journal home. The wives complain that they never get to read the Auxiliary column.



## TUBERCULOSIS ABSTRACTS

### DRUG RESISTANCE IN PULMONARY TUBERCULOSIS

Analysis of the degree of bacillary resistance to the three commonly used drugs in tuberculosis therapy points up the clinical significance of even a low degree of resistance and the importance of susceptibility tests capable of detecting resistance, however slight.

An attempt has been made to determine whether bacteriologic, roentgenographic, or clinical deterioration occurs in patients with tubercle bacilli of low degrees of resistance to drugs in use as well as in patients with highly resistant bacilli.

The analysis was carried out retrospectively. All patients with pulmonary tuberculosis whose names were brought to the notice of the research laboratory from 1952 through 1957 were included, provided there was definite evidence of resistance to at least one of the standard drugs, there had been at least three months' treatment with standard drugs, and the bacteriologic, roentgenographic or clinical information was available.

A separate analysis was made for each of the three standard drugs — streptomycin, PAS, and isoniazid.

For each patient the degree of drug resistance was classified as high, variable, or low. Seventy patients who had 187 treatment courses were analyzed.

In 91 per cent of the treatment courses, the pre-treatment roentgenogram showed far-advanced disease. In 71 per cent, the disease was considered chronic; in 22 per cent, chronic with acute spread; and in 3 per cent, acute. The mean duration of treatment per course was 8.23 months. Only treatment given while the patient was in the hospital has been considered.

For treatment courses including streptomycin and PAS, the duration of treatment at risk of change was somewhat greater in patients with organisms of a high degree of resistance than in those whose bacilli remained at a low degree of resistance; that is, those in the high resistance group had a longer period of treatment during which deterioration could occur. With isoniazid, the longest duration at risk was in the combined low-degree groups.

### DETERIORATION INCIDENCE

Bacteriologic deterioration was demonstrated in 12 of 16 patients with a high degree of resistance to streptomycin, in 5 of the 6 patients with organisms of a variable degree of resistance, and in all 7 patients at risk whose organisms were of a low degree of resistance. The incidence of deterioration by at least one criterion (bacteriologic, roentgenographic, or clinical) was 68 per cent in the high-degree group, 60 per cent in the variable group, and 82 per cent in the low.

Of the 19 patients at risk with a high degree of resistance to PAS, bacteriologic deterioration was demonstrated in 16. The numbers at risk in the variable and low-degree groups were small, the incidence of deterioration being 3 of 3 and 2 of 2,



respectively. The incidence of deterioration by at least one criterion was 68 per cent in the high-degree group, 83 per cent in the variable group, and 75 per cent in the low-degree group.

Of the 36 patients at risk with organisms of a high degree of isoniazid resistance, 29 showed bacteriologic deterioration, compared with 2 of 4 in the variable group, and 13 of 16 in the low-degree group. Twenty-three of the 66 patients in the high-degree group deteriorated clinically, 3 of 8 in the variable group, and 7 of 22 in the low-degree group. The incidence of deterioration by at least one criterion was 70 per cent in the high-degree group, 50 per cent in the variable group, and 64 per cent in the low-degree group. The incidence of improvement when the organisms were resistant to all of the drugs was 41 per cent, 50, and 29 for the three groups.

The incidence of deterioration was therefore at least as high in patients with organisms of a low degree of resistance to any of the three drugs as in those with highly-resistant bacilli.

Improvement occurred in a number of patients when their bacilli were still susceptible to at least one of the drugs and in some patients even when their bacilli were resistant to all the drugs in use. The improvement was more frequently shown by clinical criteria than by roentgenograph.

If bacilli of a low degree of resistance are of less clinical significance than those of a high resistance, it might be expected that deterioration associated with organisms of a low degree of resistance would occur later. However, in 10 of the 34 courses analyzed, deterioration occurred before the detection of resistance to streptomycin; in 8 of 23, deterioration occurred before the demonstration of resistance to PAS; and in 10 of the 63 courses which included treatment with isoniazid, deterioration occurred before resistance to that drug.

In 7 patients treated with drugs in adequate combinations, organisms were shown to be of a low degree of resistance to at least one drug and fully susceptible or of a low degree of resistance to at least one other before the start of treatment. Failure under treatment showed that the low degrees of resistance recorded before treatment were clearly of clinical significance. Two of these patients were primarily infected with bacilli resistant to one of the standard drugs.

#### CHOICE OF TEST IMPORTANT

The evidence from the present analysis shows that organisms which are only slightly less susceptible to streptomycin, PAS, or isoniazid than normal strains are as important clinically as those which are highly resistant. Deterioration during treatment frequently occurred in patients harboring bacilli of a low degree of resistance. It is therefore of primary importance that any tests used for the detection of drug resistance should detect these organisms with low degrees of resistance.

The main problem in assessing the efficiency of a susceptibility test is that there are many strains of bacilli in which resistance will be detected by

virtually any method of testing. But there are others in which resistance is not detected if unsatisfactory tests are used.

Even a slight decrease in drug susceptibility in strains of tubercle bacilli is of clinical significance.

—Sheila M. Stewart, Ph.D., and J. W. Crofton, M.D. *The American Review of Respiratory Diseases*, June, 1964.

**Gastric "Freezing" in Peptic Ulcer: Evaluation of 100 Cases** — S. Karacadag and A. P. Klotz (University of Kansas Medical Center, Kansas City), *Ann Intern Med* 61: 645-649 (Oct.) 1964.

One hundred patients have been followed for nine months or longer after gastric "freezing" for peptic ulcer. Sixty-six showed improvement at three weeks. This number decreased to 52 in three months, 27 in six months, and 18 in nine months. Serial X rays showed improvement during the first three weeks and three months in some patients. Fifty-four patients had duodenal ulcer craters prior to the freeze treatment. Twenty-five of these 54 showed disappearance of the ulcer crater. However, 12 of these had crater recurrence (2 in three months, 4 in six months, and 6 in nine months). Gastric secretory studies demonstrated a temporary reduction in volume and acid output. Almost all decreases returned to prefreeze levels within three weeks. The concept of partial vagotomy as the physiological mechanism involved is supported by the secretory findings. Destruction of gastric mucosa is not necessary to produce this effect.

**A Micro Method for Determination of Oxygen Saturation by Means of Reflection Spectrophotometry** — S. R. Gambino (Englewood Hosp, Englewood, N.J.), H. E. Goldberg, and M. L. Polanyi, *Amer J Clin Path* 42:364 (Oct.) 1964.

A reflection oximeter was designed for measuring the oxygen saturation of 0.2 ml of whole blood. The standard deviation of the collecting and measuring technique is  $\pm 0.6$  per cent. Reflection oximetry, using two wavelengths of light (650 and 805  $\mu$ ), is simple, rapid, precise, and nondestructive. Since the sample is not hemolyzed, it can be used for other tests.



# Books



**"Physiology of the Eye"** — 4th edition, by Francis H. Adler, MD. Published 4 January 65 by The C. V. Mosby Company of St. Louis, Missouri. 889 pages (7" by 10") with 437 illustrations. Price \$18.75.

The author of this book is a consulting surgeon for the Wills Eye Hospital in Philadelphia and Professor of Ophthalmology at the University of Pennsylvania School of Medicine. He has written a book that describes in understandable terms the ways that the eyes function. This work offers to the medical student and to the practicing ophthalmologist the recent findings concerning the physiology of the eye which have been the result of much work by many investigators in the experimental laboratory. The author has also described the clinical application of this newer knowledge.

**"The Retinal Vessels"** by R. Seitz, MD, translated by Frederick C. Blodi, MD. Published 30 November 64 by The C. V. Mosby Company. 186 pages (7" by 10") with 363 illustrations, including 32 in color. Price \$14.50.

Dr. Seitz is First Assistant of the University Eye Clinic at Tuebingen. Dr. Blodi is an Associate Professor of Ophthalmology at the State University of Iowa College of Medicine. The book presents comparative ophthalmoscopic and histologic studies on healthy and diseased eyes.

Major subject areas considered in this book are as follows:

- a. The "crossing phenomenon"
- b. The occlusion of retinal veins
- c. The ophthalmoscopic picture and histologic findings of various vascular diseases.

**"Heart Attack: New Hope, New Knowledge, New Life,"** by Myron Prinzmetal, MD. Published in January, 1965 by Simon and Schuster, Inc., Rockefeller Center, 630 Fifth Avenue, New York 20, New York. 233 pages (5½" by 8"). \$1.75. (in the paper back edition).

Dr. Prinzmetal, a Professor of Clinical Medicine at the University of California Medical School in Los Angeles, has written a book that is primarily designed for patients — patients who have suffered an attack of coronary thrombosis, and patients who have not — but who wish to avoid an attack. This book has been enriched by the experience of one of Dr. Prinzmetal's patients, Mr. William Winter, a well-known West Coast radio and television news analyst and lecturer.

Dr. Prinzmetal, one of our leading authorities in the field of heart disease, is one of the rare doctors who is both an experienced clinician and a research worker. In addition he is a philosopher and an accomplished author. One would expect

such a doctor to write an extremely interesting and useful book — and he has.

Many of our readers will want to recommend this book to their patients.

**"The Mask of Sanity"** — 4th edition, by Hervey Cleckley, MD. Published 10 November 64 by The C. V. Mosby Company. 510 pages (7" by 10"). Price \$9.75.

The author of this book is a Clinical Professor of Psychiatry at The Medical College of Georgia. His book is an attempt to clarify our understanding of the so-called psychopathic (sociopathic) personality. He presents first an outline of the problem, and then he gives numerous case histories. Section three deals with comparisons of the psychopath and those patients with other psychiatric disorders. The author concludes his book by giving a detailed clinical profile of the psychopath and discusses treatment of patients with this particular disorder.

**"Blood Program in World War 2"** by Major General Douglas B. Kendrick. Published in 1964 by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 922 pages (7" by 10") with 195 illustrations, 42 tables, 14 charts and 7 maps. Price \$8.00.

The author, General Kendrick, is currently the Surgeon of the U.S. Army in Europe. He carried the chief responsibility for the Army blood program during World War 2 and during much of the Korean War. The story in this book relates the experiences encountered by the U.S. Army Medical Department in the development of the whole-blood program during the above conflicts. The implementation of this program represents one of the great pioneering medical achievements of World War 2.

**"Gout"** — 2nd edition, by John J. Talbott, MD. Published by Grune and Stratton, Inc., 381 Park Avenue, South, New York City, New York, in May, 1964. 261 pages (6" by 9") with 78 illustrations. Price (not given).

This monograph, written by the editor of the Journal of the American Medical Association, is current, comprehensive, concise, and very readable. The history of this disease goes back at least 7,000 years, and it is a fascinating history to read. The author has made the remainder of the book equally interesting, and I think that our readers will agree that to write in such a manner that chapters telling about the intermediary metabolism of uric acid, the renal exchange of urate, the pharmacology of anti-gout drugs, and the pathogenesis of gout provide fascinating reading is quite an accomplishment.



The subject is discussed completely, and all of its many ramifications are presented. This reviewer's copy was presented gratis by the local representative of Merck Sharp and Dohme (who of course have an understandable interest in the subject) — but for those readers who do not receive this book in the aforementioned manner, I suggest that whatever the book costs — it's worth the money.

**"Preventive Medicine, Volume 7, Communicable Diseases and Arthropodborne Diseases Other Than Malaria,"** written by outstanding authorities in the field of preventive medicine under the guidance of an Advisory Editorial Board headed by Stanhope Bayne-Jones, MD. 370 pages (7" by 10") with 65 illustrations, 48 tables, 21 charts and 12 maps. Published in 1964 by the Superintendent of Documents, Government Printing Office, Washington, D.C. Price \$4.25.

A recent addition to the series of books telling of the history and achievements of the U.S. Army Medical Department in World War 2 is the above-mentioned book which carefully records the many problems encountered in World War 2. It tells of the failures as well as the successes experienced during the war in the prevention and control of such diseases as encephalitis, bartonellosis, dengue fever, filariasis, leishmaniasis, plague, relapsing fever, sandfly fever, typhus fever, scrub typhus, Rocky Mountain spotted fever and yellow fever.

The value of this volume to all those engaged in the various health fields is inestimable.

**"Activities of Surgical Consultants, Volume 2,"** edited by B. Noland Carter, MD. Published in 1964 by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 1,100 pages (7" by 10") with 365 illustrations, 6 charts, 8 maps, and 5 tables. Price \$8.50.

This book was written by 20 eminent surgeons who themselves participated in, directed and coordinated the surgical services in the European and Asiatic-Pacific theaters of operation during World War 2. With the combined efforts of their colleagues in all fields of medicine, the theater surgical consultants contributed to the advances made in resuscitation of the severely wounded through the use of whole blood and other measures; to rehabilitation techniques of the wounded which permitted their return to duty in greatly increased numbers; to the enlightened care and rehabilitation of blinded and deafened casualties and to many new advances in the field of anesthesiology which in turn permitted and encouraged many advances in initial, reparative, and reconstructive surgery.

This volume is filled with clinical facts and information which will be especially valuable to all surgeons and to those who are presently students or residents in surgery.

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DOCTOR — Does your wife like to read the Auxiliary news? Then be sure and take your copy home.

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(Please help us keep these addresses correct, by notifying the Editor of any changes).

## THE NEBRASKA STATE MEDICAL JOURNAL

### TEMPUS FUGIT

It seems but a short time since this JOURNAL was placed in my hands, for better or worse. Now, it is in the process of being transferred to new hands. Like many parts that make up the whole in the mechanism of our great organization, the JOURNAL may be passed from one to another again and again; in the meantime, the great and important Nebraska State Medical Association goes on and on. Members are expendable, the Association is not.

The Editor wishes to thank the Association for the opportunity he has had to be of service, and for the loyalty, helpfulness, and cooperation of its members. These have made the work easier and more joyful.

It is to be hoped that the same spirit will be shown the new Editor, Dr. Frank Cole. It is not easy to relinquish the pleasures and responsibilities of this work, but it is made much more bearable by the knowledge that the Board has been able to induce a man of Dr. Cole's ability, interest and experience to take over. It is hoped he will receive from the profession the same helpful attitude shown me during all the years of my service. Thank you all.

G. W. Covey

### THANKS, DOCTOR COVEY

The Nebraska State Medical Journal was started in 1916. The News Printing Company of Norfolk, Nebraska, has printed it for forty-nine years. Doctor George Covey has been its Editor since 1952. We have "let George do it" with something more than complete satisfaction for some thirteen consecutive years. His editorship has been outstanding, and we want to thank him publicly, and in print, and right now. The Journal has achieved national prominence and recognition, and Doctor Covey deserves the thanks of the Association, the Journal's staff, the doctors of Nebraska, and the writer.

The role of the state medical journal is multifaceted and well-nigh indispensable. The journal is the voice of the state association. It is widely read. It provides the only means of communicating among ourselves. It is an excellent medium for the publication of symposia. It can be our way of learning what is going on in other cities and states, in the myriad branches of the federal government, and even abroad. It is a peculiarly good instrument for dissertations on local variations in all facets of disease, including incidence, appearance, and treatment; it serves to inform us of epidemiological situations in our state. It contains important announcements of coming events, as well as reports of recent happenings. It keeps us informed of state health programs. It can be a convenient device for publishing the work of the faculty of our own medical schools. It keeps us in touch with our president, our medical schools, the university, and even with our wives. It does all of this after it is through being what it really is; it is a scientific medical journal of the first rank. It is the means of publishing the original writings of Nebraska doctors, whose contributions have been many and very likely above the national average, and out-of-state writers. While Doctor Covey's name has appeared as Editor, all of this has gone on at a high level, and we may have accepted it without realizing it. The banner has been held high. We shall keep it high.

Thanks, Doctor Covey.

### WE'RE TRAINING THE WORLD'S DOCTORS

American doctors used to go abroad, often to Germany, for their postgraduate training. It was perhaps necessary, and it may have become fashionable. Our own country has for many years been a center of medical research, and we have long been able to train our own doctors. In addition, there has been a steady influx of graduates of foreign



medical schools seeking hospital training in this country. Where foreign graduates filled one tenth of the internships in 1950, they made up one fourth of them in 1963. Residency figures for the same years rose similarly (New York J Med, March 15, 1965, 753), from less than one tenth to almost one fourth. The rate of change in both instances seems to have declined, so that the latest values may remain constant. The numbers are already significantly high, however, and may become even higher. We note, too (J Indiana Med Ass, Jan. 1965, 55), that 1,451 of the 8,283 new licentiates in 1963 were trained abroad.

### GOOD-BYE, CC

When we were much younger, "CC" meant compound cathartic. Of course, it also meant cubic centimeter, but medical language seemed to speak more of compound cathartic than cubic centimeters years ago. Compound cathartic continues to be dispensed; it just seems that the practice of medicine grew more precise and scientific when we began to mean cubic centimeter when we said "cc."

Now another change has taken place. We were taught (that's the editorial "we" and it sounds new and nice) that a cc. of water weighed a gram. For some time now, pharmaceutical solutions that used to be measured in cc. have begun to be labeled in ml. instead. Pharmacopeias seem to use the terms and abbreviations interchangeably, but it seems that they are not the same. The cc. is based on the centimeter and thus on the meter, which is a unit of length. The liter is the volume of a kilogram of water and equals 1000.028 cc., and is thus based on weight. The abbreviation "cc." still persists and is taken as synonymous with "ml." The term milliliter (ml.) was adopted by U.S.P. IX and N.F. IV, but was replaced by "cc." at the next Pharmacopoeial Convention. In 1955, however, U.S.P. XV and N.F. X re-adopted the term milliliter (ml.). The difference is only some 28 parts per million, and while the pharmaceutical company's reason for using weight now instead of vol-

ume (or length) may or may not be obvious, it is good to know that the slight difference has become real, and that in medical practice today, a difference of 28 parts per million is important.

Medical articles have become far more scientific during the last decade. Clinical writing has become mathematical, and articles almost purely pharmacological. And "cc." has gone from compound cathartic to cubic centimeter to oblivion. It is gone; it was an old friend and we shall miss it, but it is time for a change.

### THE RELATIVE VALUE STUDY COMMITTEE MEETINGS

Man does not live by bread alone, but he does not live without it. Or perhaps we should say, the laborer is worthy of his hire. Our committee has held many and lengthy meetings recently, and has rendered us a great service. It has met with representatives of each specialty, and has discussed its economic problems. This is our first attempt at a realistic re-evaluation since 1961. It has involved an enormous amount of work, particularly on the part of the committee, and also by individuals representing the various specialties. We have been with the unit system for some time now. This is a healthy thing, enabling us to keep up with the ever-rising cost of living. It has made it possible for all of us to change with the times, by altering the value of a unit when it is proper, which will at the same time determine at once the relative value of each procedure.

Our committee has sat and worked hour after hour without recompense. Its purpose has been manifold: to erase inequities, to include new procedures, and to do something about the unalterable fact that things cost more every year. Injustices relating to compensation court were corrected in 1961; now attempts are being made to equate us with the world of reality in which we all must live. Anesthesia, for example, may finally be on a procedure plus time basis.

And at long last, as those who are old



enough to remember hearing the King say, better negotiations have occurred, or have been possible, in relating to compensation cases and various (there are so many and once there were none) governmental and insurance agencies. As we go to press, the committee is to submit its recommendations to the House of Delegates for approval and for appointment of a negotiating committee.

Our committee has truly labored in the vineyards, and we shall all of us be grateful.

## News and Views

### Medical Library Facilities—

We note in the March-April issue of PR/DR that the AMA Film Library, available to program chairmen, was used over ten thousand times last year by doctors, hospitals, medical schools, and other groups. This represents an increase of more than 250 per cent in ten years. A catalogue, "AMA Medical-Health Film Library," is free.

### Water, Water, Everywhere—

This country's water, says an AMA editorial and news release, is no longer pure. Water is polluted with agricultural, industrial, and personal wastes. The problem, as the need for water increases with the world population, is to purify water faster than it is being polluted, but even a slight favorable balance has not yet been achieved. Even rain, once our guarantee of purity, is now polluted by the air, and pollutes sea, lake, and river water; rains carry down dusts, smokes, and pesticides, and are made radioactive in traces.

### New National Society—

The American Hospital Association announces that a national society is to be organized in Chicago, May 24-25, "to foster better public understanding of hospitals." Over 500 members of the AHA's American Society for Hospital Public Relations Directors have been invited to attend the meeting. Society membership includes Hos-

pital public relations directors, administrators, and others interested in this field. Information may be secured from the American Society for Hospital Public Relations Directors, 840 North Lake Shore Drive, Chicago, Illinois 60611.

### AMA - ERF—

We note in a progress report of the AMA Education and Research Foundation that its Loan Guarantee Program had its second consecutive year of increased activity in 1964. The number of loans increased by 13 per cent, amounting to 7,415 in 1964. More than nineteen thousand loans have been approved, with a principal value of over \$22,000,000, since March 1962, when the program began. The number of loans rose in Nebraska from 162 in 1963 to 173 in 1964, while the principal amounts for those years were \$194,300 and \$203,400. The loans, by medical school, for the two years cited, were, for Nebraska, 10 and 15, with principal amounts of \$13,900 and \$20,000. There were only 22 defaults during these two years, of which 10 were due to death of the borrower.

### Program for Children of AMA Members Attending N.Y. Meeting—

A program has been planned for children of AMA members attending the Annual Convention in New York, June 20-24. It will include a day at the World's Fair, tours of New York, and special evening entertainment. The program is planned under the auspices of the AMA Woman's Auxiliary. Reservations must be made before June 8, and should be sent to: Gulliver's Trails, 25 Central Park West, New York, New York 10023.

### The Doctor's Proportion of the Health Dollar—

An AMA release quotes Department of Commerce figures that show that hospitals received the greatest share of every health dollar in 1963. In 1943, 26 cents went to doctors, the same amount in 1953, and 25 cents in 1963; 28 cents went to hospitals in 1963. The figures for these three years, respectively, for physicians and drugs combined, were 50 cents, 45 cents, and 43 cents.

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## Comments From Your President

During the past twelve months, as President-elect of this Society, I have shared "something good," and am deeply impressed by the structure of professionalism in the makeup of our Nebraska State Medical Association. Dick Garlinghouse has more than filled the "big shoes" handed to him in April of 1964 by his predecessors. His activities have been so varied they cannot be documented. Among the major ones have been his frequent visits with the Governor and State Senators on problems and legislation related directly or indirectly to the practice of medicine in Nebraska. There are a few unresolved legislative problems, but, to date, this has been one of the Association's better years. There are many unknowns on just what makes State Legislative Session "friendly minded" but efforts have been most rewarding during this Session.

The assignments carried out by committees have been excellent. Comments on committee activities and committee reports will be presented by the Chairman from time to time on this page.

Other activities of the Society have been equally productive. This can be accomplished only by the continuity of thinking and knowledge as shown by Ken Neff, his assistant, Bill Schellpeper, and their staff. The tremendous volume of important national, regional, and local correspondence edited by this group along with the material from the AMA is presented to the members of the Society, Board of Trustees, House of Delegates and Officers. The news letter sent to you by the Executive Secretary office is worth reading and is important.



Organized medicine in this country has many major problems. One is the "built in resistiveness" of many physicians to their local society, state society and the AMA. This is the reason that the Organization of Presidents of State Medical Associations was organized in Chicago, August of 1964. The only members are president-elects, presidents, and past presidents of state medical societies. This is really a true first and has lots of talent. I am ready for any comments or instructions that might help solve this problem in the State of Nebraska.

Just a short goodbye to you Dick from this page. During the past two years you have worked exceptionally hard. At times there has really been "no tomorrow." I know I am going to have to work "my can off" to keep up with the precedent you have set.

Willis D. Wright

# Idiopathic Myelofibrosis

CASE REPORT *and*

REVIEW of LITERATURE\*

**I**DIOPATHIC myelofibrosis should be recognized as a clinical entity. The chief characteristic of this condition is an increase of fibrous or bony tissue in the bone marrow. Other prominent features of this condition are splenomegaly, enlargement of the liver, and extramedullary hematopoiesis. Anemia is present in varying degree, and has usually been considered as a chronic refractory type. The splenomegaly associated with extramedullary hematopoiesis plus a leuko-erythroblastic picture in many cases seems to have been the basis for many to consider this condition in the broad classification of myeloproliferative disorders. Myelofibrosis has generally been accepted as the preferable term for the syndrome because of its descriptive proximity to the pathological process.

This syndrome has been observed in association with, and/or has been considered as a variant of, myelogenous leukemia, a response to toxins, metastatic lesions, the end stage of polycythemia vera, and associated with longstanding infections such as tuberculosis. These forms are best considered as secondary type of myelofibrosis. Evidence seems to be sufficient to support the concept that a primary form of myelofibrosis occurs in which precipitating factors are absent. The stimulus for the formation of extramedullary hematopoietic elements in the spleen, liver, lymph nodes, and renal and adrenal tissue is not yet known.

Damashek,<sup>1</sup> in 1951, called attention to this group of disorders and, in addition, described a variety of intermediate forms which may occur. He further pointed out that a broad spectrum of blood conditions with overlapping clinico-pathological features might well be considered under this term. Cases of splenomegaly associated with variable changes in the bone marrow plus abnormal peripheral blood findings were reported by

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Lincoln, Nebraska

Sippy.<sup>2</sup> He proposed the term of splenic pseudoleukemia, which was a condition associated with leukemia and having as common findings, enlarged spleen, anemia, and no adenopathy; and these cases showed a slowly progressive course.

Chapman<sup>3</sup> applied the terms myelosclerosis and osteosclerosis with aleukemic myelosis plus bone marrow showing diffuse increase of connective tissue, similar to the syndrome, myelofibrosis. Mettier and Rusk<sup>4</sup> seemed to be the first to use the term of myelofibrosis to describe a group of cases showing a leukemoid blood picture plus fibrosis of the bone marrow. Vaughan and Harrison<sup>5</sup> found that some patients with leuko-erythroblastic anemia were found to have myelosclerosis. They further called attention to the fact that polycythemia, leukemia, and myelosclerosis were a closely related group of diseases. Jackson *et al*<sup>6</sup> have applied the term of agnogenic myeloid metaplasia to a group of cases that come within the same classification. The bone marrow was reported variously as being either normal, hyperplastic, fibrotic, or aplastic. Splenomegaly was usually quite marked in all of these cases. Icterus was quite commonly present; many of the cases gave a history of exposure to bone marrow poisons, particularly industrial solvents.

It seems wise to assume that cases of idiopathic myelofibrosis show a production deficit in the bone marrow with the result that the spleen and the liver have attempted to take over the formation of blood.

\*Presented before 19th Annual Meeting, American College of Physicians, Nebraska, February 6, 1965.



To sum up, then, the characteristics of this condition should be: (1) increase of fibrous tissue in the bone marrow; (2) marked myeloid metaplasia in the spleen and liver; and (3) the presence of immature red and white blood cells in the peripheral blood out of proportion to the degree of anemia and myeloid metaplasia.

It is the purpose of this paper to report a case that seems to fulfill the criteria of idiopathic myelofibrosis and to review the pertinent literature on this clinical condition.

### Case Report

Mrs. M. K., 61 years old, white, housewife, admitted to Bryan Memorial Hospital 12-5-64 for further studies of a severe anemia found three days prior to this admission, during the course of a complete physical examination.

Her chief complaints were tiredness and weakness, and loss of weight. Onset of symptoms was indefinite, but they seemed to be of about one year's duration. She thought she had lost about 12 to 15 pounds during this period of time. She denied contact with any chemicals, nor had she taken any medication of any type.

*Inventory by Systems* — Seems not too remarkable except for mild, recurring symptoms of hyperacidity.

*Past History* — Essentially negative. She had had no previous hospitalization.

*Family History* — Non-contributory.

*Physical Examination* — Patient was alert and cheerful. Skin was pale and showed a slight icteric tint. Temperature 99°. Weight 103 pounds.

*ENT* — Negative. Mucous membranes pale. Tongue not abnormal.

*Heart and Lungs* — Not too remarkable. No cardiac enlargement. Soft systolic murmur at the base. Pulse 88 and regular. B.P. 114/66.

*Abdomen* — Flat. Spleen about 7 cm below the costal margin. The edge was bulbous. No notch palpated. It

was non-tender. Liver was about three fingers below the costal margin. Slight resistance deep in upper right quadrant. No masses.

*Pelvic Examination* — Negative.

*Neurological* — Negative.

No adenopathy.

*Laboratory Data* — Erythrocytes (RBC), 2,540,000. MCH, 22.4; MCV, 74.8; MCHC, 30%. Hematocrit, 21%. Hemoglobin, 5.6 gm; Leukocytes (WBC), 4,400. Differential: Basophiles, 3; Metamyelocytes, 6; Bands, 20; Segs., 29; Monocytes, 3; Lymphocytes, 31; Eosinophiles, 6; Myelocytes, 2; nucleated red blood cells 8 per 100 WBC's. Platelets, 65,000. There was moderate anisocytosis and polychromasia. Bilirubin, direct, 1 min., 0.14 mg per 100 gm; 15 min., 0.55 mg per 100 gm. Indirect, 0.58 mg per 100 gm. Total, 1.13 mg.

*Urinalysis* — Essentially negative. No bile.

*USR screen test* — Non-reactive.

*Direct Coombs' test* — Negative.

*Diagnex blue test* — Presumptive evidence of achlorhydria.

*Reticulocyte count* — 4.2%.

*Fragility test* — Within limits of normal.

*Uric acid* — 5.3 mg per 100 gm.

*L.E. cell preparation* — Negative.

*Pathological Conclusion* — From repeated marrow aspirations and surgical biopsy of bone marrow, there was diffuse and marked myelofibrosis. The marrow spaces are completely replaced by dense fibrous tissue, among which one can see a scattering of fat cells and an even more sparse infiltrate of hemopoietic elements.

*X-ray Studies* — Heart and lungs essentially normal. Complete G.I. X-ray series negative except for a moderate

diverticulosis, especially of the sigmoid colon.

*Stool Studies* — Negative for parasites and ova and for occult blood.

Patient was treated with blood transfusions, steroids, and testosterone. Immediate response to this therapy has been fair to good.

## Diagnosis

An individual, middle-aged or past, complaining of marked fatigue and some loss of weight, and who shows on examination a variable degree of pallor and splenomegaly, with or without enlargement of the liver, and with no remarkable adenopathy, plus a leukemoid blood picture associated with variation in erythrocyte morphology, is a prime suspect of idiopathic myelofibrosis. Peripheral blood studies are very helpful but are not absolutely diagnostic. The anemia is usually moderate to severe. The indices reveal a normocytic, normochromic anemia. Polychromatophilia, poikilocytosis, and anisocytosis are commonly seen. Nucleated red blood cells as well as "teardrop" forms are frequently observed. These cells are more frequent in myelofibrosis than in leukemia. The white cell count is quite variable, but leukopenia will be present in a fair percentage of the cases. The differential blood cell count will usually show a "shift" to the left, and occasionally promyelocytes and blast cells will be observed. Basophilia is the rule, and may have prognostic import. Platelet counts vary considerably, and marked variation in size and shapes have been reported. Large blood platelets are frequently observed. In the last analysis, the diagnosis of idiopathic myelofibrosis is dependent upon the pathological changes found in the bone marrow. Repeated bone marrow punctures are in order, because the bone marrow material obtained is often inadequate for a diagnostic conclusion. Surgical trephine bone marrow biopsy must follow if the sternal punctures do not yield adequate tissue for study.

In a review of 70 cases of myelofibrosis, Pitcock *et al.*<sup>7</sup> found that all of the bone marrow studies showed fibrosis; however,

the degree of fibrosis varied from involvement of 5 per cent of the area of the marrow cavity at the site of biopsy to almost complete replacement of the marrow cavity by fibrous tissue. The fibrous tissue was usually loose in texture but occasionally was fairly dense. They further concluded that the histologic appearance of the bone marrow provided little prognostic information.

X-ray studies of the bony system, especially the pelvis and long bones, reveal increased density, which is rather characteristic but is not present in all cases. Bone studies might prove useful in differential diagnosis.

## Pathogenesis

Since the etiology of myelofibrosis is unknown, likewise the pathogenesis of the disorder is uncertain. By reason of the increased fibrous tissue in the bone marrow and the constant presence of myeloid<sup>7</sup> metaplasia of the spleen, many have considered it to be related to leukemia and the neoplastic reticuloses. The disorderly proliferation of blood cells associated with splenomegaly is a common denominator in a group of conditions which collectively are well known today as the myelo-proliferative disorders. Myelofibrosis has been placed in this group; but the very fact that this condition has been considered by various authors under different terms immediately suggests that the condition is still not too well understood, and knowing how to categorize the condition is still questionable.

Heller *et al.*<sup>8</sup> review this problematic group of disorders and relate the wide divergence of views regarding its significance. As stated before, myelofibrosis is characterized by fibrosis of the bone marrow plus myeloid metaplasia of the spleen and liver. As early as 1908 Donhauser<sup>9</sup> developed the hypothesis that the bone marrow was first fibrous or osseous tissue and then the condition that followed, namely, extramedullary hematopoiesis, represented attempts at compensation. This process is analogous to the development of extramedullary erythropoiesis in hemolytic anemias, pernicious anemia, and some myelophthisic diseases. This concept is supported by many, including



Wyatt and Sommers.<sup>10</sup> Wintrobe<sup>11</sup> points out that removal of the spleen is not followed by disastrous consequences, which would be expected if this organ were making an attempt to compensate for the bone marrow deficit.

Vaughan and Harrison<sup>5</sup> have advanced an alternative view. They hold that a proliferative stimulus affects various cell lines which are derived from the primitive mesenchymal cells. Thus some type of stimulus causes activity of the fibroblasts, the hemocytoblasts, and the megakaryocytes, and possibly the osteoblasts by reason of this common ancestor, the primitive reticulum cell. They further conclude that sclerosis is a secondary development. This concept further holds that the marrow and the extramedullary changes proceed simultaneously. This wide variation in the clinical and hematological features of this group of disorders stems from the variable degree to which individual cell lines are involved.

Bowdler and Prankard,<sup>12</sup> who subscribe to the proliferative stimulus hypothesis, have recommended the term, "Primary Myeloid Metaplasia," instead of myelosclerosis in describing these cases. They give the following reasons for this conclusion:

1. Myeloid metaplasia may precede the marrow fibrosis.
2. Proliferation of fibrous tissue is not always confined to the bone marrow, but may be found in other organs, as the spleen and lymph nodes.
3. The frequent occurrence of myeloid metaplasia with excessive production of cellular elements of the blood does not suggest that it is developing in response to a deficiency in cell formation.

### Prognosis

It is generally reported that the prognosis for patients with myelofibrosis is comparable to patients with chronic granulocytic leukemia. A large percentage of the patients die during the first two years. However, many of these patients have lived for many years. Treatment, by and large, seems to have little effect on the outcome of these cases; but the judicious management of the

complications, such as infection and hemorrhage, and effective compensation for the bone marrow deficit, no doubt add materially to the longevity of these patients.

The pathological findings in the bone marrow offer little prognostic information. The total white blood counts are not too helpful; but cases showing an increase in the immature forms had a poor prognosis. Cases with marked basophilia do not seem to fare as well. The degree of anemia is of some value in predicting the outcome of a case. In those whose initial hemoglobin is 10 gm or less, the outlook is not so good. The number of nucleated red cells does not seem to have prognostic significance.

### Treatment

The therapy of myelofibrosis is not very effective. The judicious use of blood transfusions is probably the most helpful therapeutic agent. Since this condition is by natural history a chronic state and repeated transfusions will be necessary, they must be given with the exercise of great caution. The various unpleasant side effects of transfusions are well known, especially the suppressive effect on hematopoiesis. These patients seem to be conditioned to the low values of hemoglobin, so no real purpose is served by trying to keep their hemoglobin values above 9 or 10 grams.

These patients are quite susceptible to infection, and they may require the frequent administration of antibiotics, particularly a broad spectrum type, as tetracycline. Also the drug might be used as a prophylactic measure in the presence of the extremely low granulocyte counts.

Corticosteroids have had wide usage in hypoplastic anemia and bone marrow failure. The exact effect of these hormones on the bone marrow is not well understood. In the normal man the steroid compounds cause a rise in neutrophils and a fall in the lymphocytes and eosinophils in the peripheral blood. The effect on the bone marrow is less definite. Animal experiments have not shown constant results, for in some instances the steroids have caused a reduction in the cellularity of the marrow substance



while in other experiments a stimulatory effect has been produced.

The corticosteroids may prove quite effective in cases showing a hemolytic process, in which immune mechanism may be operative, and in those cases where hypersplenism might be a factor. The effects of the steroids on immune mechanism appears to be related to their effect on lymphoid tissue. In those cases associated with thrombocytopenia, corticosteroids may be of value. Increased platelet counts do not always occur, but it is generally agreed that the vascular component of the condition is improved.

*Androgenic Hormones* — It is well known that androgenic hormones have stimulated erythropoiesis in patients with breast cancer and those with refractory anemia, as well as in castrated and normal experimental animals. These and other observations have suggested the probability that androgenic hormones are a governing factor in red cell formation, and should be worthwhile in the treatment of myelofibrosis. Their ultimate effect is still doubtful.

Shahidi and Diamond<sup>13</sup> have reported quite favorable response to testosterone in 24 cases of aplastic anemia, both acquired and congenital types. In 17 patients with severe acquired aplastic anemia who were given testosterone propionate, or methyltestosterone, there was shown good response in the majority of cases. The total daily dose of 1 or 2 mg per kilo of body weight was attempted. This was usually given sublingually. The maintenance dose was usually 60 to 70 mg per day.

Kennedy<sup>15</sup> reports a group of eight cases of myelofibrosis treated with androgenic hormones. He employed testosterone propionate, 100 mg three times a week, or fluoxymesterone, 20 to 40 mg daily. Six of the eight cases of myelofibrosis so treated showed striking improvement. The signs of favorable response to therapy were demonstrated by increase in the cellular elements of the peripheral blood, and less so by the conversion of a hypocellular to a hypercellular marrow. He found that concomitant administration of corticosteroid hormone is necessary in some instances.

*X-ray Therapy* — X-ray treatment to the spleen in this condition has been regarded as ineffective. There probably is an occasional case, especially when the splenic enlargement is great or the patient suffers a great deal from upper left quadrant pain, when roentgen therapy would be indicated.

The use of busulfan in these cases has been reported but it is doubtful if it has any place as a useful therapeutic agent, especially in the case of idiopathic myelofibrosis.

*Splenectomy* — Splenectomy is seldom indicated in the treatment of myelofibrosis. Wintrobe<sup>11</sup> states that if the enlargement of the spleen is the result of an attempt to compensate for hypofunctioning bone marrow by extramedullary blood formation, splenectomy or irradiation of the spleen would not be expected to be helpful and might be harmful. Green *et al.*<sup>14</sup> report that their observation of five patients with "agnogenic myeloid metaplasia" who were subjected to splenectomy were demonstrated to have myelofibrosis. In none of these cases did splenectomy seem to have a deleterious effect, and one patient showed hematologic improvement. It may be concluded from the accumulated evidence that splenectomy is not indicated in idiopathic myelofibrosis. There may be an occasional case showing unusual thrombocytopenia, or an active hemolytic process, or signs suggesting hypersplenism, that might be benefited by surgical removal of the spleen.

### Summary

1. Idiopathic myelofibrosis should be considered as a clinical entity.
2. The cause of the condition is not known.
3. Final diagnosis is dependent on the characteristic pathological findings in adequate bone marrow studies.
4. Treatment is only palliative. It should always be conservative and designed to maintain a reasonably satisfactory state of well-being.

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"American business cannot afford to lose its traditional daring, its competitive urgency, its willingness — eagerness — to try the untried. How to preserve individual initiative and drive — especially within large organizations — is a subject worthy of our best minds." (From CED statement on "Educating tomorrow's managers: The Business Schools and Business Community. Release of October 30, 1964). What less could be said of Medicine? Ed.

# Venous Pressure\*

**J**UST as with arterial blood pressures, isolated venous pressure determinations mean little unless they are markedly increased or decreased. Serial determinations mean a great deal when allowance is made for the factors which influence venous pressure.

The classical manner of monitoring patients in the operating room consists of following the patient's respiratory rate and depth, the pulse rate and quality, the auscultatory arterial blood pressure, and observing the skin for its color, temperature and moisture. To the above in recent years has been added electrocardiogram (EKG), electroencephalogram (EEG), direct arterial blood pressure recordings, end-expiratory  $pCO_2$ , and the esophageal stethoscope among others. Each of the before mentioned means of observing patients has its merits and disadvantages.

Although venous pressure has been measured since 1902, few physicians have used this valuable tool until the advent of open-heart operations. In recent months measurement of the venous pressure has become a standard procedure in some circumstances.

The factors which influence venous pressure are: First and foremost, the zero level. It must be remembered that the line of reference for venous pressure is the level of the right auricle. Changes in the position of the patient, such as raising or lowering the head, must be taken into account and suitable adjustments made in the zero line. The second major factor that contributes to a change in venous pressure is the site chosen for the needle or catheter. This plays a part as the venous pressure tends to be higher as one progresses toward the periphery. Ordinarily this is no problem since we are interested in changes of venous pressure rather than absolute numbers. We have

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found that changes in venous pressures at the wrist parallel those measured simultaneously in a jugular vein. (See figure 1).

Fluctuations in venous pressure occur as the result of opening the thorax, applying pressure to the inferior vena cava with packs and retractors, sudden releasing of pressure on the central veins as with the delivery of the youngster during cesarean section, and positive pressure on the re-breathing bag of the anesthesia machine.

There are two general methods for obtaining direct venous pressures. A continuous pressure can be obtained using heparinized saline to prevent clotting in the catheter tip. The catheter is attached directly to a strain gauge or a simple water manometer. This method requires flushing the system occasionally with the heparin solution. Individuals who use this technique claim no increased bleeding due to the small amount of heparin used. The tip of the catheter must be proximal to any venous valves present in the vein as they may open or close periodically to give wide fluctuations in the venous pressure. The intermittent readings can be taken with a technique that we have been using for the last year and a half. Venous valves pose no problems nor does heparin have to be used. In addition the technique is simple and inexpensive and takes but a few moments to set up. (See figures 2 and 3).

There are three general areas where this technique may be of value. First the pre-operative preparation of patients, particularly those patients who are dehydrated and who may have a low blood volume. Second, during the operative period in: (1) those patients who may have a sanguineous pro-

\*Presented before Omaha Mid-West Clinical Society, 32nd Annual Meeting, October 26, 1964.



I would like to stress that measurement of venous pressure is not a panacea and taken alone means little. However, with serial determinations and when added to all the other methods of monitoring a patient, plus clinical judgment, the venous pressure measurement may be of great value to the physician.

Figure 1 compares venous pressure taken in a peripheral vein at the wrist with the venous pressure taken in the jugular vein. Note the almost parallel response even though the peripheral venous pressure is considerably higher than the jugular pressure at all times.

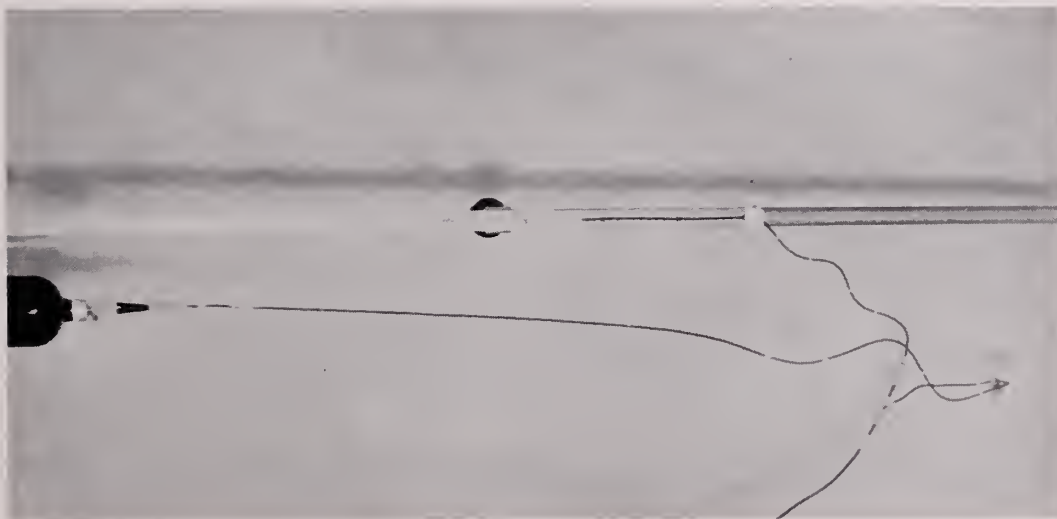


Figure 2. An infusion set as that found in any hospital is used. A dye has been added here for clarity. A second infusion set is taped to a meter stick.



Figure 3. Detail of figure one showing the second infusion set "piggy backed" into the first. Fluid is allowed to run from the bottle into the second infusion set. The set from the bottle is clamped and the fluid in the plastic tubing taped to the meter stick is allowed to run, it stops when the venous pressure is reached.

| PREL. TESTS                                                                                                                                                                                                                                                                                           |  | SITE OF OPERATION                                                                                                                                                                                                                                                                                   |  |  |  |  |  |  |  |  |  |  |  | ANESTHESIA RECORD                                                                                                                                                                                                                                                                                   |  |  |  |  |  |  |  |  |  |  |  | ANESTHETIC AGENTS                                                                                                                                                                                                                                                                                   |  |  |  |  |  |  |  |  |  |  |  | ANESTHETIC METHODS                                                                                                                                                                                                                                                                                  |  |  |  |  |  |  |  |  |  |  |  |
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pumping of whole blood at No. 2. You will also note that as the blood replacement corresponded to the blood loss, the venous pressure remained on a normal, equal plane.





# Study of Twins

Born in Douglas County, Nebraska

## Introduction

**I**N his textbook of obstetrics, J. P. Greenhill discusses multiple births in the section on pathology "because the consequent maternal and infant morbidity proves that it is distinctly abnormal for the human female to bear more than one offspring at a time."<sup>1</sup> This abnormal phenomenon occurred 477 times in Douglas County, Nebraska in six selected years from January 1, 1940 through December 31, 1963. This is the report of a study which was undertaken to determine several things concerning the birth of these twins. The information was obtained from birth certificates of all twins born in the years 1940, 1945, 1950, 1955, 1960 and 1963 in Douglas County, Nebraska.

## Incidence

The question of incidence of twin births, which seems to interest many people, especially the geneticists, is immediately complicated by the fact that there appear to be racial differences. Guttmacher,<sup>2</sup> for example, found that twin pregnancies are more common in Negroes and are rare in Mon-

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golians. Included in the Douglas County study were 52 Negro, three Mexican, one Indian and 421 Caucasian sets of twins. Table number 1 shows the per cent which each race contributes to the total number of twins. Table number 2 shows the total relative incidence of white and Negro births which occurred during the same time period as the twin births in table number one. A comparison of the figures in these two tables shows that 88.2 per cent of the twins were white and 10.9 per cent were Negro. During this same time period 90.5 per cent of all babies born were white and 8.8 per cent were Negro. This means that 13 out of every 1,000 Negro babies are twins whereas only 11 out of every 1,000 white babies are twins.

\*To begin July 1, 1964

†Department of Preventive Medicine, University of Maryland School of Medicine after July 1, 1964

Table 1

RACE OF TWINS BORN IN DOUGLAS COUNTY, NEBRASKA  
DURING THE YEARS 1940, 1945, 1950, 1955, 1960 AND 1963

|              | 1940 | 1945 | 1950 | 1955 | 1960 | 1963 | Total | %     |
|--------------|------|------|------|------|------|------|-------|-------|
| White -----  | 48   | 41   | 81   | 88   | 91   | 72   | 421   | 88.2  |
| Negro -----  | 2    | 6    | 5    | 10   | 13   | 16   | 52    | 10.9  |
| Mexican ---- | --   | --   | --   | 2    | 1    | --   | 3     | 0.7   |
| Indian ----- | --   | 1    | --   | --   | --   | --   | 1     | 0.2   |
| Total -----  | 50   | 48   | 86   | 100  | 105  | 88   | 477   | 100.0 |

Table 2

TOTAL NUMBER OF BIRTHS RECORDED  
(SINGLE AND MULTIPLE) IN DOUGLAS COUNTY, NEBRASKA  
DURING THE YEARS 1940, 1945, 1950, 1955, 1960 AND 1963

|            | 1940 | 1945 | 1950 | 1955 | 1960 | 1963 | Total  | %     |
|------------|------|------|------|------|------|------|--------|-------|
| White ---- | 4225 | 5068 | 7333 | 7192 | 7869 | 8055 | 39,742 | 90.5  |
| Negro ---- | 202  | 283  | 530  | 775  | 948  | 1115 | 3,853  | 8.8   |
| Other ---- | 26   | 70   | 37   | 47   | 46   | 106  | 332    | 0.7   |
| Total ---- | 4453 | 5421 | 7900 | 8014 | 8863 | 9276 | 43,927 | 100.0 |

Table 3  
AGE OF MOTHER OF TWINS  
BORN IN DOUGLAS COUNTY, NEBRASKA  
DURING THE YEARS 1940, 1945, 1950, 1955, 1960 AND 1963

| Years       | 1940 | 1945 | 1950 | 1955 | 1960 | 1963 | Total | %     |
|-------------|------|------|------|------|------|------|-------|-------|
| 15-19 ----- | 4    | 1    | 2    | 10   | 7    | 10   | 34    | 7.1   |
| 20-24 ----- | 16   | 12   | 26   | 21   | 28   | 30   | 133   | 27.9  |
| 25-29 ----- | 13   | 17   | 29   | 32   | 31   | 21   | 143   | 30.0  |
| 30-34 ----- | 8    | 10   | 18   | 24   | 23   | 21   | 104   | 21.8  |
| 34-39 ----- | 8    | 5    | 8    | 9    | 11   | 6    | 47    | 9.8   |
| 40-44 ----- | 1    | 3    | 3    | 4    | 5    | 0    | 16    | 3.4   |
| Total ----- | 50   | 48   | 86   | 100  | 105  | 88   | 477   | 100.0 |
| Avg. -----  | 27.3 | 28.5 | 25.6 | 27.7 | 28.0 | 26.3 | 27.2  |       |

Table 4  
AGE OF FATHER OF TWINS  
BORN IN DOUGLAS COUNTY, NEBRASKA  
DURING THE YEARS 1940, 1945, 1950, 1955, 1960 AND 1963

| Years       | 1940 | 1945 | 1950 | 1955 | 1960 | 1963 | Total | %     |
|-------------|------|------|------|------|------|------|-------|-------|
| 15-19 ----- | 0    | 1    | 0    | 2    | 1    | 2    | 6     | 1.3   |
| 20-24 ----- | 9    | 5    | 14   | 13   | 20   | 16   | 77    | 17.1  |
| 25-29 ----- | 15   | 14   | 30   | 30   | 21   | 19   | 129   | 28.6  |
| 30-34 ----- | 10   | 10   | 20   | 24   | 22   | 27   | 113   | 25.1  |
| 35-39 ----- | 6    | 13   | 9    | 15   | 22   | 9    | 74    | 16.4  |
| 40-44 ----- | 7    | 3    | 5    | 4    | 10   | 5    | 34    | 7.6   |
| 45-49 ----- | 0    | 0    | 3    | 5    | 4    | 1    | 13    | 2.9   |
| 50-54 ----- | 1    | 1    | 0    | 1    | 0    | 1    | 4     | 1.0   |
| Total ----- | 48   | 47   | 81   | 94   | 100  | 80   | 450   | 100.0 |
| Avg. -----  | 31.0 | 31.3 | 30.3 | 31.2 | 33.3 | 30.3 | 31.2  |       |

Table 5  
PARITY OF MOTHER OF TWINS  
BORN IN DOUGLAS COUNTY, NEBRASKA  
DURING THE YEARS 1940, 1945, 1950, 1955, 1960, AND 1963

|             | 1940 | 1945 | 1950 | 1955 | 1960 | 1963 | Total | %    |
|-------------|------|------|------|------|------|------|-------|------|
| 1 -----     | 12   | 10   | 24   | 18   | 16   | 22   | 102   | 21.4 |
| 2 -----     | 20   | 10   | 29   | 16   | 23   | 12   | 110   | 23.1 |
| 3 -----     | 7    | 11   | 18   | 28   | 15   | 14   | 93    | 19.5 |
| 4 -----     | 3    | 5    | 4    | 19   | 16   | 16   | 63    | 13.2 |
| 5 -----     | 2    | 5    | 9    | 10   | 10   | 11   | 47    | 9.9  |
| 6 -----     | 4    | 3    | 1    | 3    | 13   | 3    | 27    | 5.7  |
| 7 -----     | -    | 1    | -    | 1    | 5    | 3    | 10    | 2.1  |
| 8 -----     | -    | 1    | -    | 3    | 4    | 2    | 10    | 2.1  |
| 9 -----     | -    | 1    | 1    | 1    | 1    | 4    | 8     | 1.7  |
| 10 -----    | 2    | 1    | -    | -    | 1    | -    | 4     | 0.8  |
| 13 -----    | -    | -    | -    | -    | -    | 1    | 1     | 0.2  |
| 15 -----    | -    | -    | -    | -    | 1    | -    | 1     | 0.2  |
| Total ----- | 50   | 48   | 86   | 99   | 105  | 88   | 476   |      |
| Avg. -----  | 2.8  | 3.3  | 2.5  | 3.2  | 3.8  | 3.5  | 3.2   |      |

Table 6  
PERINATAL MORTALITY OF TWINS  
BORN IN DOUGLAS COUNTY, NEBRASKA  
DURING THE YEARS 1940, 1945, 1950, 1955, 1960 AND 1963

|                                        | 1940 | 1945 | 1950 | 1955 | 1960 | 1963 | Total | %    |
|----------------------------------------|------|------|------|------|------|------|-------|------|
| Fetal Deaths -----                     | 11   | 5    | 15   | 25   | 20   | 25   | 101   | 10.6 |
| Stillbirths -----                      | 7    | 2    | 10   | 8    | 8    | 4    | 39    | 4.1  |
| Total -----                            | 18   | 7    | 25   | 33   | 28   | 29   | 140   | 14.7 |
| Per cent of total<br>twins that year-- | 18   | 7.3  | 14.5 | 16.5 | 13.3 | 16.5 |       |      |



Table 7  
**PAIRED MORTALITY OF TWINS**  
**BORN IN DOUGLAS COUNTY, NEBRASKA**  
**DURING THE YEARS 1940, 1945, 1950, 1955, 1960 AND 1963**

|                                                | 1940 | 1945 | 1950 | 1955 | 1960 | 1963 | Total |
|------------------------------------------------|------|------|------|------|------|------|-------|
| Both stillborn -----                           | 2    | 1    | 2    | 2    | 2    | 2    | 11    |
| Both neonatal deaths -----                     | 3    | 1    | 6    | 7    | 8    | 10   | 35    |
| One stillborn and<br>one neonatal death -----  | 1    | -    | 2    | 1    | 1    | -    | 5     |
| First stillborn and<br>second born alive ----- | -    | -    | 1    | 1    | 2    | -    | 4     |

In 1895, Hellin<sup>3</sup> propounded the law that twins are born once in every 89 births, triplets in 89<sup>2</sup> births, and quadruplets in 89<sup>3</sup> births. Since that time several studies have been done to determine the incidence of twin births as compared to single births. The values thus determined are almost as numerous as the studies. In the Seski and Miller<sup>4</sup> series the incidence was 1:99. Waddell and Hunter<sup>5</sup> reviewed 14,891 births of which 203 were twin cases for an incidence of 1:73. Aaron, Silverman, and Halperin<sup>6</sup> had a ratio of 1:106 in their series of 21,790 deliveries. In the Douglas County study the ratio of twin deliveries to single deliveries was 1:81.

According to Anderson,<sup>7</sup> the incidence of twinning increases with age and parity. Seski and Miller<sup>4</sup> found in their study that the majority of twins were born of mothers 25 through 29 years of age and to those of a parity of four or more. As can be seen in table 3, in the Douglas County study the majority of twins were born of mothers 25 through 29 years of age, the average age being 27.2 years. The most frequent age for the twins father (table 4) was also 25 through 29 years. However, the average age of the father (31.2 years) was almost four years more than that of the mother.

With regard to parity of the mother, the Douglas County findings do not agree with those of Seski and Miller.<sup>4</sup> In the Douglas County sample, 77.2 per cent of the twins were born of mothers whose parity was four or less (table 5). The most frequent parity of the mother in the Douglas County series was two (23.1 per cent). Aaron and Halperin,<sup>21</sup> in their study of 376 twin deliveries, found that twin pregnancies are more fre-

quent in primigravidas. The average parity was 3.2 in the Douglas County sample.

### Perinatal Mortality

The incidence of perinatal mortality varies considerably from one reported series to the next. In Guttmacher's<sup>1</sup> series the incidence was 31 per cent. Bender<sup>9</sup> reported 11 per cent. Little and Friedman<sup>10</sup> reported 9.2 per cent. Tow<sup>11</sup> reported 12.3 per cent and Waddell and Hunter<sup>5</sup> reported 10.0 per cent. Of the 954 babies in the Douglas

Table 8  
**LENGTH OF PREGNANCY FOR TWINS**  
**BORN IN DOUGLAS COUNTY, NEBRASKA**  
**DURING THE YEARS, 1940, 1945, 1950**  
**AND 1963**

| Weeks       | 1940 | 1945 | 1950 | 1963 | Total |
|-------------|------|------|------|------|-------|
| 44 -----    | -    | -    | -    | 1    | 1     |
| 42 -----    | -    | -    | -    | 1    | 1     |
| 41 -----    | -    | -    | -    | 2    | 2     |
| 40 -----    | 28   | 31   | 30   | 28   | 117   |
| 39 -----    | -    | -    | 9    | 6    | 15    |
| 38 -----    | -    | -    | 6    | 15   | 21    |
| 37 -----    | -    | -    | 5    | 6    | 11    |
| 36 -----    | -    | 2    | 14   | 6    | 22    |
| 35 -----    | -    | 1    | 4    | 3    | 8     |
| 34 -----    | 5    | 9    | 1    | 2    | 17    |
| 33 -----    | 1    | 1    | 2    | -    | 4     |
| 32 -----    | 1    | -    | 5    | 4    | 10    |
| 31 -----    | -    | 1    | -    | 1    | 2     |
| 30 -----    | 1    | -    | 2    | 3    | 6     |
| 29 -----    | -    | 3    | 2    | 2    | 7     |
| 28 -----    | -    | -    | -    | 3    | 3     |
| 27 -----    | -    | -    | -    | 1    | 1     |
| 26 -----    | 3    | -    | 1    | -    | 4     |
| 25 -----    | -    | -    | 1    | -    | 1     |
| 24 -----    | -    | -    | 1    | -    | 1     |
| 23 -----    | 1    | -    | -    | -    | 1     |
| 22 -----    | -    | -    | 2    | 1    | 3     |
| 20 -----    | -    | -    | 1    | -    | 1     |
| 18 -----    | -    | -    | -    | 1    | 1     |
| Total ----- | 40   | 48   | 86   | 86   | 260   |
| Avg. -----  | 37   | 38   | 36   | 37   | 37    |

County study, there were 140 perinatal mortalities for an incidence of 14.7 per cent. Table 6 gives the perinatal mortality figures during each year studied. These figures indicate that there has been little improvement in the area of fetal salvage in recent years. Of the 140 cases of perinatal mortality in this series, 102 (72.9 per cent) were from pregnancies in which neither twin survived the neonatal\* period.

In the series reported by Waddell and Hunter<sup>5</sup> 63 per cent of the perinatal deaths

\*The neonatal period for this study was considered to be that period of time during which the twins remained hospitalized.

were from pregnancies in which neither twin survived. There were four cases in the Douglas County study in which the first twin was stillborn and the second twin survived. These statistics are shown in table 7.

### Length of Pregnancy

The average length of pregnancy for the stillborn twins was 29 weeks. Length of pregnancy statistics for neonatal deaths were not available for the years 1940 and 1955. However, averaging the figures from the other years included in this study, it was found that the mean length of pregnancy for babies who died during the neonatal period

Table 9  
NEONATAL DEATHS OF TWINS  
BORN IN DOUGLAS COUNTY, NEBRASKA  
DURING THE YEARS 1940, 1945, 1950, 1955, 1960 AND 1963

|                                        | 1940 | 1945 | 1950  | 1955  | 1960  | 1963  | Total |
|----------------------------------------|------|------|-------|-------|-------|-------|-------|
| Total number                           | 11   | 5    | 15    | 25    | 20    | 25    | 101   |
| % of total twins                       | 11   | 5.2  | 8.7   | 12.5  | 10    | 14.2  | 10.6  |
| Avg. length of pregnancy (weeks)       | --   | 35   | 28    | --    | 30*   | 31    | 31    |
| Avg. weight #                          | --   | --   | 2#    | --    | 2#†   | 2#    | 2#    |
| oz                                     | --   | --   | 2oz   | --    | 13oz  | 13oz  | 9oz   |
| Race White/%                           | 9/82 | 4/80 | 14/93 | 19/76 | 19/95 | 23/92 | 88/87 |
| Negro/%                                | 2/18 | 1/20 | 1/7   | 6/24  | 1/5   | 2/8   | 13/13 |
| 1st born #/%                           | 4/36 | 2/40 | 6/40  | 12/48 | 9/45  | 13/52 | 46/46 |
| 2nd born #/%                           | 7/64 | 3/60 | 9/60  | 13/52 | 11/55 | 12/48 | 55/54 |
| Avg. interval between births (minutes) | 12   | 13   | 6‡    | 18    | 10    | 8     | 11    |
| Males #/%                              | 6/55 | 2/40 | 4/27  | 8/32  | 12/60 | 15/60 | 47/47 |
| Females #/%                            | 5/45 | 3/60 | 11/73 | 17/68 | 8/40  | 10/40 | 54/53 |
| Length of life Avg. No. of hrs.        | 85   | 33   | 26    | 12    | 24    | 140   | 53    |

\*—17 cases only

†—14 cases only

‡—7 cases only

Table 10  
STILLBORN TWINS IN DOUGLAS COUNTY, NEBRASKA  
DURING THE YEARS 1940, 1945, 1950, 1955, 1960 AND 1963

|                                        | 1940  | 1945  | 1950   | 1955 | 1960  | 1963 | Total |
|----------------------------------------|-------|-------|--------|------|-------|------|-------|
| Total number                           | 7     | 2     | 10     | 8    | 8     | 4    | 39    |
| % of total twins that year             | 7.3   | 2.0   | 5.8    | 4.0  | 3.8   | 2.3  | 4.3   |
| Avg. length of pregnancy (weeks)       | 27*   | 34    | 32     | 28   | 34    | 20   | 29    |
| Avg. weight #                          | --    | --    | 2#     | 2#   | 3#†   | --   | 2#    |
| oz                                     | --    | --    | 3oz    | 2oz  | 5oz   | 10oz | 1oz   |
| Race White/%                           | 7/100 | 2/100 | 10/100 | 6/75 | 8/100 | 2/50 | 35/90 |
| Negro/%                                | --    | --    | --     | 2/25 | --    | 2/50 | 4/10  |
| 1st born #/%                           | 2/29  | 1/50  | 5/50   | 3/38 | 4/50  | 2/50 | 17/44 |
| 2nd born #/%                           | 5/71  | 1/50  | 5/50   | 5/62 | 4/50  | 2/50 | 22/56 |
| Avg. interval between births (minutes) | 15†   | 10    | 15     | 26   | --    | --   | 16    |
| Male #/%                               | 3/43  | 1/50  | 7/70   | 3/38 | 7/88  | 2/50 | 23/59 |
| Female #/%                             | 4/57  | 1/50  | 3/30   | 5/62 | 1/12  | --   | 14/36 |
| Sex ? #/%                              | --    | --    | --     | --   | --    | 2/50 | 2/5   |

\*—6 cases only

†—5 cases only

was 31 weeks. The average length of those pregnancies in which neither twin survived the neonatal period was 28.2 weeks. The average duration of 260 twin pregnancies in the Douglas County series was 37 weeks. This includes 95 per cent of all twins born during the years 1940, 1945, 1950 and 1963 (table 8). Seski and Miller<sup>4</sup> also found the average duration of pregnancy in their series to be 37 weeks.

### Fate of the Second Twin

Several authors have shown a poor prognosis for the second infant<sup>8, 10, 12-18</sup> while others feel that the second twin is in no greater danger than the first.<sup>6, 9, 19-21</sup> In Spurway's<sup>15</sup> series, of a total perinatal mortality of 12.2 per cent, 61.6 per cent were second twin. In the Douglas County series, of 140 perinatal mortalities, 77 (55 per cent) were second twin.

Graves, Schrier, and Adams<sup>22</sup> studied 872 twin pregnancies in which the perinatal death rate was 14.4 per cent. The incidence of stillbirths in their series was 4.4 per cent with the first twin accounting for 46.6 per

cent and the second twin 53.4 per cent of the stillbirths. The incidence of neonatal deaths was 13.5 per cent with 47.5 per cent of these being the first twin and 52.5 per cent being the second twin. In the Douglas County study 54 per cent of the neonatal deaths were second twin (table 9) and 56 per cent of the stillbirths were second twin (table 10).

### Interval Between Births

The possibility that a prolonged interval between the birth of twins might contribute to an increased perinatal mortality has been considered by several investigators. Drucker, Finkel, and Savel<sup>23</sup> reported a case in which the second twin was born 65 days after the first. In the 203 twin pregnancies reported by Waddell and Hunter<sup>5</sup> the longest time between the delivery of twin A and B was 60 minutes. In 88 per cent of their cases both twins were born in 15 minutes or less and in all instances in which twin B was stillborn or died in the neonatal period it was delivered between 5 and 15 minutes after twin A. Seski and Miller<sup>4</sup> found that a lengthy interval between births was associated with an increase in fetal mortality. The average interval between A and B live births in their series was 7.6 minutes while for fetal deaths it was 23 minutes. Graves, Adams, and Schrier<sup>22</sup> found that 33 per cent of their twin B deaths had been born within 5 minutes, 57 per cent within 10 minutes, and 72.7 per cent within 15 minutes of twin A. In the Douglas County study the average interval between all births was 11.7 minutes (table 11). For the stillbirths it was 16 minutes (table 10). Bender<sup>9</sup> found a delivery interval of 15 minutes or less in 60 per cent of perinatal deaths and 30 minutes or

Table 11  
AVERAGE INTERVAL BETWEEN BIRTHS  
(MINUTES) FOR TWINS BORN IN  
DOUGLAS COUNTY, NEBRASKA  
DURING THE YEARS 1940, 1945,  
1950, 1955, 1960 AND 1963

| Year          | Minutes |
|---------------|---------|
| 1940 -----    | 12.1    |
| 1945 -----    | 15.6    |
| 1950 -----    | 9.6     |
| 1955 -----    | 13.8    |
| 1960 -----    | 9.9     |
| 1963 -----    | 9.2     |
| Average ----- | 11.7    |

Table 12  
INTERVAL BETWEEN BIRTHS (MINUTES)  
FOR TWINS BORN IN DOUGLAS COUNTY, NEBRASKA  
DURING THE YEARS 1940, 1945, 1950, 1955, 1960 AND 1963

|           | 0-15<br>min. | %  | 0-30<br>min. | %  | 0-45<br>min. | %  | 0-60<br>min. | %   | over 60<br>min. | % |
|-----------|--------------|----|--------------|----|--------------|----|--------------|-----|-----------------|---|
| 1940 ---- | 39           | 78 | 46           | 92 | 48           | 96 | 49           | 98  | 1               | 2 |
| 1945 ---- | 38           | 79 | 44           | 92 | 46           | 96 | 46           | 96  | 2               | 4 |
| 1950 ---- | 70           | 82 | 83           | 98 | 84           | 99 | 85           | 100 | 0               | 0 |
| 1955 ---- | 70           | 71 | 88           | 89 | 94           | 95 | 97           | 98  | 2               | 2 |
| 1960 ---- | 84           | 85 | 95           | 96 | 97           | 98 | 98           | 99  | 1               | 1 |
| 1963 ---- | 72           | 85 | 82           | 96 | 83           | 98 | 84           | 99  | 1               | 1 |
| Avg. ---  |              | 80 |              | 94 |              | 97 |              | 98  |                 | 2 |



less in 85 per cent of perinatal deaths. In 3.5 per cent the interval was over one hour. He concluded that a prolonged interval between the deliveries did not cause a higher mortality. Birth interval figures for all the Douglas County twin births are recorded in table 12. They show an interval of 15 minutes or less in 80 per cent of the cases and 30 minutes or less in 94 per cent of the cases. In only two per cent of the cases was the birth interval greater than 60 minutes.

According to Spurway, "the well-known higher mortality rate of male infants also occurs with twins."<sup>15</sup> In the Douglas County study there were 70 male infants, 68 female infants, and 2 infants of undetermined sex accounting for the 140 perinatal mortalities. The over-all male:female ratio in the study was 105.6 males for every 100 females. The total male to female birth rate for all births during the period of study was 106.3 males for every 100 females.

### Neonatal Deaths

There were 101 infants in the Douglas County study who were born alive but did not survive the neonatal period. The vital statistics concerning these 101 babies are recorded in table nine. The over-all incidence of neonatal deaths in the series was 10.6 per cent with a low of 5.2 per cent in 1945 and a high of 14.2 per cent in 1963. The average length of pregnancy for the neonatal deaths was 31 weeks compared to 37 weeks for the entire study. Birth weights were available only for those neonatal deaths which occurred in 1950, 1960 and 1963. The average weight of these 60 cases was two pounds nine ounces. The average weight of 344 twin babies born in 1950 and 1960 was four pounds fourteen and one half ounces. Birth weight figures were not available for twins born during the other four years of the study. The racial distribution of neonatal deaths (87 per cent white and 13 per cent Negro) was very similar to the over-all racial distribution (88.2 per cent white and 10.9 per cent Negro). The average duration of life for those twins who died during the neonatal period was 53 hours. The lowest yearly average of 12 hours occurred in 1955 and the highest yearly average of 140 hours

occurred in 1963. The most frequent cause of death for these infants was prematurity.

### Sex of Twins

Of the 477 sets of twins in this study 32.1 per cent were both female, 34.8 per cent were both male and 32.7 per cent were mixed (table 13). There were two sets of twins whose sex could not be determined. The total number of females was 462 and the total number of males was 488. In those cases in which one twin was male and the other female the male twin was born first 43 per cent of the time and the female was born first 57 per cent of the time.

Table 13  
SEX OF TWINS BORN IN DOUGLAS  
COUNTY, NEBRASKA DURING  
THE YEARS 1940, 1945, 1950,  
1955, 1960 AND 1963

|             | FF   | MM   | MF   | ?   | Total |
|-------------|------|------|------|-----|-------|
| 1940 -----  | 12   | 17   | 21   | --  | 50    |
| 1945 -----  | 17   | 15   | 16   | --  | 48    |
| 1950 -----  | 31   | 29   | 26   | --  | 86    |
| 1955 -----  | 28   | 40   | 31   | 1   | 100   |
| 1960 -----  | 36   | 37   | 32   | --  | 105   |
| 1963 -----  | 29   | 28   | 30   | 1   | 88    |
| Total ----- | 153  | 166  | 156  | 2   | 477   |
| % -----     | 32.1 | 34.8 | 32.7 | 0.4 |       |

### Summary

1. Twinning is more common among Negroes than among whites.
2. In Douglas County, Nebraska, the ratio of twin deliveries to single deliveries is 1:81.
3. The majority of twins are born of mothers 25 through 29 years of age.
4. In Douglas County, Nebraska, 14.7 per cent of twins do not survive the perinatal period.
5. The average duration of twin pregnancies is 37 weeks.
6. Survival chances for the second-born twin are poorer than survival chances for the first-born twin.
7. The average interval between the birth of the first twin and the birth of the second twin is longer for stillbirths than for live births.

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"Most of us fail to realize the grave responsibility we physicians have, not only to be able to resuscitate the asphyxiated patient effectively ourselves, but also to teach a simple, effective means of resuscitation to local rescue agencies, police, firemen, Boy Scouts, and our individual patients, particularly new mothers." (Cross, Allen S.: The use of exhaled air in emergency resuscitation. *Med Ann District of Columbia* 29:657, December, 1960).

# The Vivisection of Capital Criminals

for the

## ADVANCEMENT OF MEDICAL KNOWLEDGE

THE desire for medical truth had manifested itself very early in human experience. The practical utilization of murderers as a means to advance medical knowledge was begun in ancient Egypt. Somewhat later, Ptolemy Philadelphus attained notice by placing at the disposal of the scientists of Alexandria criminals condemned for the worst crimes. The rise of Alexandria to a medical center in ancient times was, in great measure, due to this institution.

Several centuries later, Herophilus, the Chalcedonian and pupil of Praxagoras of Cos, and later Diocles of Carytus, the first of the Hippocratic school to distinguish himself as an anatomist, began to dissect criminals. These were obtained from the prisons by royal permission. With Erasistratus, Herophilus carried on his anatomical researches on the bodies of living criminals on a large scale, it being reported that Herophilus alone dissected over six hundred criminals in the course of these studies.

The ancient apologists for human vivisections of Herophilus and Erasistratus maintained that these anatomists were thus "enabled to behold, during life, those parts which nature had concealed, and to contemplate their situation, color, figure, size, order, hardness or softness, roughness or smoothness, and so forth." They added "that it is not possible, when a person has any illness to know what is the cause of it, unless one is exactly acquainted with the situation of the viscera; nor can anyone heal any part without understanding its nature; that when the intestines protrude through a wound, a person who does not know what is their color when in a healthy state cannot distinguish the sound from the diseased parts, nor therefore apply proper remedies; while, on the contrary, he who is acquainted with the natural state of the diseased parts will un-

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dertake the cure with confidence and certainty; and that, in short, is not to be called an act of cruelty, as some persons suppose it to be, to seek for the remedies of an immense number of *innocent* persons in the sufferings of a few *criminals*." (Tertullian, *De Medic*, i, p. 6).

The next important stage in the history of criminal vivisection was enacted during the Middle Ages. In Montpellier and in other cities, at this time, physicians vivisected criminals in their search for medical principles. In the Italian cities of Florence, Venice, and Pisa, this practice was sanctioned and practiced. In the "Criminal Archives of Florence," Professor Andreozzi has discovered the fact that during the reign of Cosimo de Medici, condemned criminals were, from time to time, sent to the physicians of Pisa, there to be "anatomized." Among the cases presented in his work, "Leggi Penali degli antichi Cinese," some are worthy of notice:

1. December 14, 1547. Guilli Mancini Sanese was condemned for robbery and other offenses. Sent to Pisa to be anatomized. *Ducatur Pisa pro faciendo de eo notomia.*

2. In the record of prisoners sent away, dated September 1, 1551, occurs this entry: "Letter to the Commissioner of Castrocaro that Maddelena who is imprisoned for killing her son, should be sent here, if she is likely to recover, as it pleases S.E. that she should be reserved for anatomy. Of this, nothing is to be said, but she is to be kept in hoples. If she is not likely to recover, the executioner is to be sent for to decapitate her . . . Went to Pisa, to be made an anatomy."



3. December 12, 1552. A man named Zuccheria, accused of piracy, was reserved from hanging, with his comrade, and sent to Pisa, *per la notomia*.

4. December 22, 1552. A certain Ulivo Di Paolo was condemned by the Council of Eight to be hanged for poisoning his wife. Sentence changed . . . to be sent for anatomy. Was sent to Pisa, January 13.

5. November 14, 1553. Marguerita, wife of Biajio D'Antonou, condemned to be beheaded for infanticide . . . December 20, when she was released from the fetters and consigned to a familiar, who took her to Pisa to the Commissario, who gave her, as usual, to the anatomists, to make an anatomy of her; this was done accordingly. (*Che la consegnì, seconda il solito, al notomista, par farne notomia, come fu fatto*).

Several other cases, from 1554 to 1570, are recorded, which inform us that two thieves, Paolo Di Giovanni and Vestrini D' Agnolo, were sent together by the Council of Eight to be anatomized, the Duke having written to say that they wanted, in Pisa, a subject for anatomy. After the date 1570 no more cases occur in the Archives. In all, thirteen criminals were delivered over for specific scientific research. During part of this period the great Vesalius and his pupil Fallopius, were carrying on their researches in anatomy and lecturing on this science.

After this period, the vivisection of criminals diminished to a very small scale. Now and then a vivisection was performed for some definite purpose. Such was the case of Henry II of France who was mortally wounded by a splinter from a spear which had entered below his vizor and pierced his eye. The surgeons, for the purpose of discovering the probable injury done to the king, cut off the heads of four criminals and thrust splinters into their eyes at the same inclination as the fatal one that had entered the eye of the king. Although this procedure was not altogether a procedure done for the greatest good for the greatest number of people, it was a little more laudable than the order of the Persian monarch who caused the heads of a number of crim-

inals to be struck off so that his chief surgeon might closely observe the convulsions of the muscles of the neck at the instant of decapitation. A more redeeming case was that of Dr. Edward Jenner's venture into vivisection. When Dr. Jenner discovered vaccination as a safeguard against smallpox, King George III of England ordered that Dr. Jenner test his vaccination on six criminals who were awaiting the death penalty in British prisons.

Several generations ago, in France, a celebrated savant, author of a work on the effects of the imagination, desired to prove his theories by actual practice. For the purpose of carrying out this proposition, he requested the Minister of Justice in Paris to allow him to try an experiment on a criminal condemned to death. The Minister consented, and turned over to the physician a murderer of distinguished rank. The physician informed the prisoner that several persons being interested in his family had prevailed upon the judge not to require of him the usual means of execution. His sentence, he was told, was therefore changed. "But," continued the physician, "you shall be bled to death within the precincts of your prison; your dissolution will be gradual, and free from pain." The prisoner consented to be put to death by the physician. He was accordingly made ready for the experiment. By arranging things in such a manner he was led to believe that his veins had been opened and that his blood was flowing freely out of his veins. However, what had really happened was that he had been gently pricked on the skin, and small fountains of water were placed about him, to simulate the flow of blood. His veins were intact and he had not lost a drop of blood. Within a few hours the man was dead, and the doctor was convinced that the imagination played a very important role in human affairs.

Within more modern times the question of vivisectioning capital criminals in the interest of society and science has come up for consideration from time to time in the various countries of Europe. Even in the United States there has been, at various intervals, earnest and serious discussion of this ques-

tion. Among the most notable was that at a meeting of the Tri-State Medical Association, held at Peoria, Illinois, October 3, 1893. At this time, Dr. John S. Pyle read a paper titled, "A Plea for the Appropriation of Criminals, Condemned to Capital Punishment, to the Experimental Physiologists." Dr. Pyle suggested: "A building should be especially erected and every form of mechanical appliance provided for the prosecution of psychical inquiry and studies for the general nervous system. A body of expert physiologists . . . should be appointed to carry out the commands of the state. Every person interested in scientific studies or physiologic and psychical inquiry should be admitted to executions."

Several years later Mr. Rowlen introduced into the Senate of Ohio a bill proposing the vivisection of capital criminals. (*House Bill No. 135, 71st General Assembly, Regular Session*). It consisted of three long sections of which the following quotations will serve to show the substance:

That all persons sentenced to death by any court having jurisdiction in the State of Ohio, shall be held as subjects for experimental research; that such experiments should be conducted in the interest of science and society.

That the executioner shall be an expert physiologist, duly appointed and authorized by the State, and that such appointments to execute and conduct such experiments shall be vested in the governor and shall consist of one executioner and five assistant physiologists, with a like number of deputies, who shall hold their office for the terms of good behavior, except upon proof of incompetency.

That no one shall be present at the experiment except the warden in charge of the prisoner, the executioner, assistants and deputies, and those who have duly qualified themselves to comprehend the experimental work.

The measures proposed by Dr. Pyle and Mr. Rowlen never went through, either because sentiment was too strong against them, or that they were not sufficiently refined to convince society that it would be better served. If it is necessary to deprive a criminal culpable of a capital crime of his life, it must be done in a manner whereby the interests of society and science will be advanced.

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"No specific agent has been identified as the cause of emphysema and the chances are that one never will be. The prevailing opinion is that, as with other chronic, degenerative diseases, many factors combine to produce this obstructive pulmonary condition. (Bulletin, National Tuberculosis Association, October, 1964, p. 13). -

# Neurologic Manifestations of Hypoxia

## Final Installment

### PERINATAL HYPOXIA<sup>50a</sup>

One of the major adjustments of the infant during and immediately following birth concerns his getting all parts of his respiratory apparatus functioning for effective ventilation. Before and during labor, the infant is entirely dependent on the oxygenation of maternal blood and his lifeline via placenta and cord.

Two per cent of live births are apneic two minutes or more; nine per cent of caesarian birth are thus.

Forty to 55 per cent of stillbirths (macerated or fresh) and neonatal deaths are associated with severe hypoxia.

As with the adult, although with variations peculiar to the perinatal and neonatal state, the newborn infant's respiratory efficacy depends on:

1. Adequate oxygen in inspired air.
2. Clear airway
3. Thoracic-diaphragmatic function
4. Uninhibited respiratory exchange at alveolar and capillary level.
5. Hemoglobin transport
6. Active respiratory center (medulla)
7. Intact neural pathways to muscles of respiration
8. Cardiovascular system (hemodynamic)
9. Advantageous internal biochemical environment, without which, (a) respiratory center is depressed as with severe electrolyte or pH alterations, or (b) oxydation at neuronal level is impaired as with hypoglycemia.
10. Cerebrovascular pathways

Further etiologic scrutiny is permitted from the vantage point of:

1. Maternal factors

JOHN A. AITA, MD, PhD  
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2. Fetal factors
  - Prenatal
  - Intranatal
3. Postnatal factors

In a given patient, etiologic factors may be multiple or overlapping. It may be difficult to separate one from another, for instance, concomitance of maternal toxemia, prematurity and hyaline membrane disease.

*Maternal factors* include the following:

- Maternal hypoxia or hypotension of any cause, particularly if severe and of sudden onset
- Inferior vena cava compression by gravid uterus (supine)
- Diabetes mellitus
- Toxemia (pre-eclampsia, eclampsia)
- High maternal age (higher incidence of placental inadequacy).
- Prolonged, difficult or complicated labor
- Prolonged, severe uterine contractions
- Conditions necessitating caesarian section
- Summation of complications of pregnancy and parturition
- Placental inadequacy
  - Separation
  - Infarction
  - Praevia
  - Defective implantation
  - Toxemia
  - Postmaturity
  - Uterine rupture

*Prenatal (fetal) factors* include:

- Malformation
  - Intracranial
  - Cardiovascular
  - Thoracic, diaphragmatic
  - Pulmonary
    - Cystic disease
    - Inadequate maturation; agenesis, hypoplasia
    - Primary atelectasis
- Airway
  - Vascular ring
  - Pierre-Robin abnormality (hypoplastic mandible with glossoptosis)
  - Nasopharyngeal encephalocele
  - Macroglossia
  - Esophageal-tracheal fistula
  - Laryngeal defects
  - Choanal atresia
  - Stenosis, e.g. subglottic, bronchial
  - Mediastinal masses



- Tracheal webs
- Methemoglobinemia (congenital)
- Infection
- Aspiration; amniotic fluid, meconium
- Central (medullary), inadequacy
- Phrenic nerve injury, abnormality
- Hydramnios
- Multiple pregnancy
- Prematurity (immaturity)

*Intranatal (fetal) factors include:*

- Umbilical cord
  - Prolapse
  - Obstruction: knots, kinks, compression, rupture
  - Around neck of fetus (strangulation)
- Abnormal presentation
- Multiple pregnancy
- Narcosis of respiratory center
  - Drugs and anesthesia given mother
- Hypoxia and hypercapnia depressing respiratory center
- Intracranial hemorrhage, injury
- Aspiration: Amniotic fluid, meconium, blood
- Pulmonary hemorrhage
- Pneumonia

*Postnatal factors include:*

- Laryngeal dysfunction, spasm
- Mucous plugs
- Hyaline membrane disease
- Pneumonia
- Pneumothorax (alveolar rupture); mediastinal emphysema
- Traumatic emphysema
- Pleural effusion, hemorrhage
- Pulmonary injury by resuscitation
- Injury of thorax, diaphragm, pleura
- Convulsions from any cause
- Hypoxia and hypercapnia from any cause
- Acidosis (metabolic)
- Cardiac arrest
- Premature clamping of cord
- Hypotension from any cause, including
  - Adrenal hemorrhage
  - Bacteremia
  - Anemia
- Hemorrhagic disease of C.N.S.
- Hypoglycemia

*Clinical Features:*

Significant hypoxia is associated with:

1. Death in utero
  - Still birth, macerated
  - Still birth, fresh (recent death)
2. Apneic, live birth
  - Death
  - Survival with sequelae
  - Apparent complete recovery
3. Respiratory distress syndrome (postnatal)
  - Death
  - Survival with sequelae
  - Apparent complete recovery

Fetal and perinatal hypoxia cannot be detected with certainty in early stages. Once hypoxia becomes critical, the following signs may appear:

- Fetal struggling
- Extrusion of meconium
- Bradycardia, tachycardia, cardiac irregularity

However, the diagnosis of *prenatal* hypoxic fetal distress remains unsatisfactory and is accomplished in only 30 per cent of hypoxic stillbirths.<sup>51</sup> Perhaps improved techniques of fetal EKG will be helpful.<sup>52</sup>

The apneic infant who survives may demonstrate complete recovery or linger with disabilities, transient, permanent or eventually fatal. The average expectations in gross physiologic function and responses of the healthy newborn are known and may even be "scored."<sup>53</sup> Attempts have been made to standardize a number of signs of the clinical status of the newborn, as:

- Color
- Pulse rate
- Respiration
- Pain threshold
- Reactions to standard stimuli
- Visual function and pursuit
- Sensitivity to stimuli
- Muscular tonicity
- Mental alertness
- Resting positions
- Spontaneous activity
- Athetoid movement
- Oral reflexes
- Grasping reflexes

Feeding and crying phenomena, cyanosis, vital functions and neurologic examination provide some estimate of the total situation. All of these "criteria" are nonspecific, however, and subject to a great number of influences.<sup>54</sup>

*Respiratory distress syndrome* is manifested by labored breathing which may be insidious at first, becoming obvious 6-12 hours after birth. It is often associated with hyaline membrane disease or atelectasis. Alterations in respiratory rate, rhythm, and depth, periods of apnea, grunts on expiration, intercostal and suprasternal inspiratory retraction and, later, inspiratory retraction of sternum and lower ribs are noted.<sup>54a</sup>

## EEG Correlates

Among the newborn with acute hypoxia, general correlation appears with prolonged apnea, gross clinical abnormality and EEG disturbances. However, as the infant is more premature, EEG changes are more difficult to interpret. Among infants with less prolonged apnea and less severe clinical signs, EEG correlates are less certain.<sup>55</sup>

In one group of 13 newborns with uncomplicated perinatal apnea and subsequent convulsions, nine disclosed various interseizure EEG abnormalities described as:<sup>55a</sup>

- Bilateral small amplitude waves
- Bilateral sharp waves
- Bilateral focal sharp waves
- High amplitude unilateral sharp waves

Chronic hypoxia usually discloses sufficient physiologic adaptation that EEG correlates with it, *per se*, do not appear.<sup>24, 26, 27</sup>

## Neuropathology

In the stillborn or newborn dying of hypoxia histopathologic changes may be compounded of many factors surrounding complicated parturition.

The least complicated post mortem findings reveal small hemorrhages spotted under pleura, endocardium and in the brain, likely due to hypoxic damage to small vessel endothelium and congestion.<sup>56</sup> Other viscera may disclose similar findings. Aspiration pneumonia, pneumonitis and atelectasis are also common.

The infant surviving at least a few days will disclose more definitive, acute histopathologic changes:

Cerebral cortical neuronal loss (laminar); also in thalamus, globus pallidus, hippocampus, subthalamic nucleus, amygdaloid nucleus (not unlike that found in adult).

### Petechial hemorrhages

These are characteristically subependymal and may rupture into ventricle ("hypoxic hemorrhages")

Ischemic softenings (especially in central white matter, periventricular regions)

So-called hypoxic hemorrhages are found in 10-20 per cent of perinatal deaths. These are larger than the oft found petechial hemorrhages. They may rupture into ventricular or subarachnoid spaces. They appear

commonly from small subependymal venules and are the result of stasis, congestion, and endothelial degeneration. They are also seen as subarachnoid, ventricular, and isolated pial hemorrhages. Birth trauma is more likely to produce subdural bleeding, dural tears, and rupture of cerebral veins. However, difficulties may occur occasionally in discerning whether hemorrhages are due to hypoxia, trauma, or hemorrhagic disease.

If the infant survives several weeks or longer, full-scale pathologic development demonstrates:<sup>57, 58, 58a</sup>

- Widespread sites of cerebral softenings
- General cerebral atrophy
- Focal cortical scars
- Cerebellar atrophies
- Nodular atrophies and scleroses of cortex; lobar sclerosis, porencephalic cysts
- Gliosis and cystic degeneration of cerebral white matter
- Demyelination (patchy or diffuse) of cerebral white matter
- Basal ganglion cysts, atrophy or marbling (hypermyelination)

## Sequelae

The child surviving cerebral damage due to antenatal, intranatal and/or postnatal hypoxia may demonstrate one or more of the following:

- Epilepsy
- Mental retardation
- Cerebral palsy
  - Spastic paresis, paralysis
  - Basal ganglion syndromes
- Cerebellar deficit
- Hyperkinesis
- Aphasic disorders
- Central visual loss
- Delayed personality maturity
- Behavior disorders
- EEG abnormalities
- Hypsarrhythmia<sup>58, 59</sup>

Following perinatal hypoxia, one is left then to contemplate these clinical possibilities:

1. Fatalities (stillbirth, neonatal death).
2. Those surviving with gross deficits.
3. Those surviving without apparent damage.
4. A group lying between No. 2 and No. 3, difficult to discern or appraise by present methods.

That perinatal hypoxia may contribute to brain damage and neuronal loss in survivors

there appears no doubt. The chief questions concern:

1. In which patients?
2. In what frequency?
3. In what eventual clinical expression?

To date, the range of clinical sequelae appears broad and may conceivably encompass also some ultimate "psychiatric" disorders. Answers to these important questions are difficult to attain because:

Criteria of perinatal hypoxia are mostly clinical, variable, often uncertain and nonspecific.

Perinatal hypoxia has not been quantified in any standard manner.

Duration of hypoxia must be considered. The infant's restitution, response to therapy and rapidity of recovery may signify brief (albeit severe) hypoxia with good return of all functions.

Besides hypoxia, multiple other factors may be important in ultimate effects on brain tissue.

The structural and clinical sequelae of hypoxia are nonspecific.

Milder degrees of cerebral impairment are difficult to recognize, quantify.

The underlying etiology of hypoxia may contribute directly to cerebral susceptibility or damage:

Maternal diabetes

Toxemia

Intracranial anomalies, injury, hemorrhagic disease.

Hypoglycemia, hypocalcemia

Genetic metabolic disease

"Prematurity" (immaturity)

Between birth and time of follow-up appraisal, multiple other factors may retard cerebral development or cause brain damage.

Perinatal hypoxia is but a part of and correlates with a greater picture involving:

Complications of pregnancy

Complications of labor

Prematurity

Other abnormal neonatal conditions

Literature of recent years contains a spectrum of many conflicting reports, some of which suggest that infants tolerate hypoxia well or on an "all or none" basis, either dying or surviving without sequelae. Others demonstrate correlation between perinatal hypoxia and brain damage, great or little, and indicate that this hypoxia accounts for a significant per cent of damage not otherwise explained by our present, limited knowledge of specific etiologies. More critical studies favor the latter conclusions.<sup>55a, 58a, 60</sup>

One notes, however, that a number of children survive severe perinatal hypoxia without apparent sequelae.

Hypoxia at birth may result in only a slight reduction of ultimate intellectual ability in many instances. Some studies report that a number of hypoxic infants ultimately reveal quantitative and qualitative intellectual impairments insufficient, however, to disable them with "mental retardation."

One cannot state with certainty today what fraction perinatal hypoxia contributes to the four per 1000 liveborn in the United States who disclose "cerebral palsy" nor to the two or three per cent mentally retarded.

Myocardial damage may appear with hypoxia, manifest as myocardial failure. Unless recognized and treated this may contribute further to hypoxia.<sup>61</sup>

Major supportive treatments recently reported include hypothermia, hyperbaric oxygen and transfusion with oxygenated blood. Assessment of their value is awaited.<sup>62</sup>

### BREATH-HOLDING ATTACKS<sup>63</sup>

Breath-holding to syncope occurs in adults only with such maneuvers as hyperventilation followed by a strenuous Valsalva effort; or hyperventilation followed by considerable physical exertion at which time a voluntary suppression of desire to breathe may be made. In some infants, neurorespiratory mechanisms are such that breath-holding may occur as part of the effort of expressing emotional distress. In these situations it occurs with active crying, yelling, or sobbing wherein breathing becomes irregular with prolonged periods of expiratory emotional effort at the expense of inspiration which becomes infrequent and brief. This combined with some physical exertion (commonly seen in distressed infants who flail and thrash about) adds up to some oxygen debt. The vocal cords participate in these emotional exertions and at some point (common at end of expiration) the laryngospasm does not release. Apnea, hypoxia, and loss of consciousness ensue.

Diagnostic features are:

Child usually under age three, rare beyond age six.

EEG tracing normal; even during a bout it may disclose only transient hypoxic effects.



Precipitated by anger, fear, pain thence crying.  
May be able to provoke attack diagnostically.  
Pathognomonic "stages:"

Provocation

Crying

Apnea, cessation of effort briefly

Cyanosis

Restlessness

Unconsciousness

Rigidity, opisthotonos (usually of gradual evolution)

Twitching, urinary incontinence

Total duration of apnea usually under 30 seconds.

Occasionally 40 seconds.

Apnea usually appears within 15-20 seconds of onset of crying. Crying of longer duration appears to develop a smoother pattern with less spasmodic respiratory effects.

Apnea commonly occurs at end of expiration.

Cannot refill lungs.

A counter stimulus can abort the sequence up to time of loss of consciousness.

Frank convulsive (grand mal) pattern is not common.

Usually quick restitution.

Prognosis usually excellent.

Anemia reported common in one study.<sup>64</sup>

Laryngeal stridor does not occur.

Behavioral (hysterical, tantrum, manipulative; family setting) aspects evident.

May appear with postencephalitic sequelae or Riley's dysautonomia.

Long-term, cumulative hypoxic damage does not appear to develop in these patients. Each attack is usually self-limiting and without risk, although one death has been reported from vomiting and aspiration.<sup>65</sup>

## DROWNING<sup>66</sup>

Drowning ranks high as one of the most common causes of accidental death. Acute CO<sub>2</sub> retention and oxygen deprivation occur simultaneously. Hypoxia progresses rapidly to anoxia. Voluntary apnea is followed by involuntary aspiration and swallowing of water and unconsciousness. Cardiac arrest is not an uncommon occurrence shortly thereafter. Although laryngospasm may prevent aspiration in some, various and even large amounts of water are usually found in lungs.

Aspiration of fresh water often produces:

Hypervolemia

Hemodilution

Hemolysis

Hyperkalemia

Pulmonary edema

Rarely, hemoglobinuria

Aspiration of salt water often induces:

Hypovolemia

Hemoconcentration

Hypotension

Hypernatremia

Pulmonary edema

Occasionally hypovolemia (hemoconcentration) occurs in fresh water drowning, due to shift of intravascular fluid to lungs in pulmonary edema.

Foreign body material (mud, sand) may also injure bronchi and alveoli. These considerations are important following the immediate response to resuscitation and account for many delayed deaths.

## METHEMOGLOBINEMIA<sup>67</sup>

Methemoglobinemia does not cause distress in adults until 25-50 per cent of hemoglobin is so involved. As the per cent reaches or surpasses 50 per cent, symptoms of acute hypoxia become prominent. In children symptoms may appear at 20 per cent concentration of meth Hb. Cyanosis is an early sign, appearing in concentrations as low as one and five-tenths per cent but often obscured in dark skinned patients. In low-grade or subacute severity, it may be significant only when added to other causes of hypoxia.

Methemoglobinemia appears most often from exogenous toxic sources, rarely in several congenital (often genetic) forms.

Congenital methemoglobinemia may be accompanied by a small incidence of *mental retardation*, the cause of which awaits explanation. Most infants appear remarkably symptom-free other than being cyanotic.

Exogenous methemoglobinemia may appear from the most unexpected sources, usually via medications, adulteration, or accidental means. Occasional patients disclose a peculiar intolerance to, and conversion of benzocaine or aminosalicic acid to formation of meth Hb. Phenacetin and pyridium are well known causes, as are a number of nitrites. Nitrates that are convertible to nitrites are also culpable (e.g. in well water).

On rare occasion, special strains of *E. coli* infection have been considered etiologic in forming nitrites from body proteins. Aliphatic nitro compounds and aromatic amino and nitro compounds are not rare causes.

Aniline compounds, sulfonamides, nitrobenzene, nitrous gases (e.g. arc welding), nitroglycerine, and resorcinol have been cited as culpable.

Remarkable therapeutic responses occur with intravenous injection of ascorbic acid or methylene blue.

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Why am I so concerned with the vanishing art of diagnosing with the eyes and ears? Because, as I continue to see many people in consultation, I am impressed with the fact that many could have had their disease diagnosed in two minutes if their physician had only taken one shrewd look, and then taken a good history . . . (From Alvarez, Walter C.: The Vanishing Art of Diagnosing With the Eyes and Ears. The New Physician, January, 1964, page 33).

## Coming Meetings

### CRIPPLED CHILDREN'S CLINIC—

May 1 — Kearney, Good Samaritan Hospital

May 22 — Falls City, Elks Club

June 5 — Norfolk, Norfolk State Hospital

June 19 — Hastings, Mary Lanning Hospital

### SOUTHWEST SURGICAL CONGRESS —

Hot Springs, Arkansas, May 10-13, 1965, Velda Rose Towers Motel.

### NEBRASKA HEART ASSOCIATION —

With Nebraska State Health Department; Scientific Session, Omaha, May 16, 1965. Info: Nebraska Heart Association.

### PULMONARY DISEASE SEMINAR —

May 19, 1965, presented at Hastings, Nebraska, by the Adams County Medical Society. Doctors John R. Durrance, Joseph L. Kovarik, and Thomas L. Petty of Denver, Colorado, will present the afternoon program, to be followed by dinner.

### METABOLIC DEFECTS — The Fifth Annual

Postgraduate Seminar of Childrens Memorial Hospital, Omaha, will be held on Friday, May 21, 1965. Guest speakers will be Victor H. Averbach, PhD, and Angelo M. Di George, MD. Further information can be obtained by writing to Carol R. Angle, MD, Childrens Memorial Hospital, Omaha, Nebraska 68105.

### THE AMERICAN COLLEGE OF PHYSICIANS —

Will present Postgraduate Course No. 15, "Current Concepts in Gastroenterology," on May 24-26, 1965, at the Stephen Leacock Building Amphitheatre, McGill University, Montreal, P.Q., Canada. Fees: A.C.P. Members, \$60; Nonmembers, \$100. Registrations and requests for information and application blanks are to be sent to Edward C. Rosenow, Jr., MD, Executive Director, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.

### THE THOMPSON - BRUMM - KNEEPER

CLINIC — Of St. Joseph, Missouri, announce the 16th annual Dr. F. G. Thompson, Sr., lectureship, to be given on Thursday evening, May 27, 1965, at 8:15 in the Clinic Building. The profession is invited.

### THE AMERICAN COLLEGE OF PHYSICIANS —

Will present Postgraduate Course No. 16, "Basic Principles in Internal Medicine," on June 7-11, 1965, at the Auditorium, College of Pharmacy, University of Iowa, Iowa City, Iowa. Fees: A.C.P. Members, \$60; Nonmembers, \$100. Registration forms and information requests are to be sent to Edward C. Rosenow, Jr., MD, Executive Director, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.

### AMERICAN CANCER SOCIETY — 1965

Scientific Session — Drake Hotel, Philadelphia, June 16, 1965. Info: Director of Professional Education, American Cancer Society, 219 East 42nd Street, New York 10017.

### THE GREAT PLAINS INDUSTRIAL MEDICAL ASSOCIATION MEETING —

June 19, 1965, Omaha, Nebraska. For information contact: G. P. McArdle, MD, 1216 Medical Arts, Omaha.

### THE 7th ANNUAL AMA-ASHA PRECONVENTION SESSION ON SCHOOL

HEALTH — Will be held on the evening of June 20, 1965, in conjunction with the AMA Annual Convention in New York City. All physicians, educators, dentists, and nurses are invited. For additional information, write to the Department of Community Health and Health Education, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

### THE ANNUAL MEETING OF THE AMERICAN ACADEMY OF PHYSICAL

MEDICINE AND REHABILITATION — Will be held on August 22-27, 1965, at the Sheraton Hotel, in Philadelphia.

### AMERICAN ASSOCIATION OF BLOOD BANKS —

18th annual meeting; Ameri-



cana Hotel, Bal Harbour, Florida, September 14-17. Info: The Association at 30 North Michigan Ave., Chicago 2.

**OMAHA MID-WEST CLINICAL SOCIETY**  
— Annual 4-day Postgraduate Sessions, October 25, 26, 27, 28, 1965; Civic Auditorium, Omaha.

**ANNUAL OTOLARYNGOLOGIC ASSEMBLY of 1965** — Will be held October 30 through November 5, in the new Illinois Eye and Ear Infirmary at the Medical Center, Chicago. The Department of Otolaryngology of the University of Illinois College of Medicine offers a condensed postgraduate basic and clinical program for practicing otolaryngologists under the direction of Doctor Emanuel M. Skolnik. It is designed to bring to the specialists current information in medical and surgical otorhinolaryngology. Info: Department of Otolaryngology, College of Medicine of the University of Illinois at the Medical Center, Chicago Box 6998, Chicago, Illinois 60680.

**FIRST NATIONAL CONFERENCE ON AREAWIDE HEALTH FACILITIES PLANNING, AMA** — Americana Hotel, Bal Harbour, Florida, November 28-29, 1965.

**Future Meetings of the American College of Surgeons—**

**ANNUAL CLINICAL CONGRESS**, October 18-22, 1965, Atlantic City, New Jersey.

— 1966 —

**BAL HARBOUR, FLORIDA**, January 13-15. Sectional Meeting. Americana Hotel.  
**HOUSTON, TEXAS**, January 31 - February 2. Sectional Meeting. Sheraton-Lincoln Hotel.

**CLEVELAND, OHIO**, March 14-17. Annual 4-Day Sectional Meeting for Doctors and Graduate Nurses. Sheraton-Cleveland and nearby hotels.

**ANNUAL CLINICAL CONGRESS**, October 10-14, 1966. San Francisco, California.

For any advance information address: Secretary, American College of Surgeons, 55 East Erie Street, Chicago, Illinois 60611.

**THE HAHNEMAN MEDICAL COLLEGE AND HOSPITAL** of Philadelphia offers the following Postgraduate Education Courses during 1965 and 1966:

— July 26-30, 1965: Interpretation and Therapy of Cardiac Arrhythmias; Dr. Dreifus; Hahneman CVI Building.

— November 22-24, 1965; 15th Hahneman Symposium Cancer Chemotherapy; Dr. Isadore Brodsky; Sheraton Hotel.

— December 8-10, 1965: A Hahneman Symposium on New Concepts in Gynecological Oncology; Dr. George C. Lewis; Sheraton Hotel.

— April 20-23, 1966: 16th Hahneman Symposium, Arterial Occlusive Disease; Dr. Albert N. Brest; Marriott Motor Hotel.

— December, 1966: 17th Hahneman Symposium, Nutritional Dysfunction; Dr. Donald Berkowitz; Sheraton Hotel, Philadelphia.

**ANIMAL CARE PANEL** — 16th Annual Meeting; Sheraton Hotel, Philadelphia; November 15-19, 1965. Contact Mr. Joseph J. Garvey, Executive Secretary, 4 East Clinton Street, Joliet, Illinois 60434.

**SECOND NATIONAL SYMPOSIUM ON COCCIDIOIDOMYCOSIS** — December 8-9-10, 1965, Del E. Webb Towne House, Phoenix, Arizona. For further information, contact: Arizona Tuberculosis and Health Association, Inc., 733 West McDowell Road, Phoenix, Arizona 85007.

**CONTINUING EDUCATION** — Closed Chest Resuscitation; University of Nebraska College of Medicine, at Eppley Research Institute, March 8, 1966 (for physicians, 9th for dentists, and 10th for nurses). Info: Continuing Education, University of Nebraska College of Medicine, 42nd and Dewey, Omaha 5.

**NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS** — "Vision for the Space Age;" Houston, Texas, Rice Hotel, March 24-26, 1966. Info: Director of Information John D. Coleman, 16 East 40th Street, New York 10016.

## Medicare in Operation

### Acute Emotional Disorders—

Care for acute emotional disorders must be accomplished on an inhospital basis, and constituting an emergency which is a threat to the life and health of the patient.

Such care must meet the following conditions:

1. Care is authorized at the Government's expense for such emergencies *only* until the disorder subsides.
2. Pending for completion of arrangements for care elsewhere, other than at Government expense, whichever is earlier.
3. If the duration of hospitalization does not exceed 21 days.

Extension beyond the 21 days may be considered for short periods of time for the following reasons:

1. When there is a necessity for more time for the sponsor to assume responsibility.
2. Difficulty in obtaining agreement of state or municipal institutions to accept patient.
3. When retention in the hospital for a matter of two to three weeks will result in a cure or remission which will permit patient to return home.
4. When underlying diagnosis for determination of length of care cannot be made within the 21-day period.

If the attending physician considers that hospitalization is required beyond a 21-day period, he should immediately submit a clinical report, together with the name of the dependent, and the Service member's number, rank, et cetera, to the Contracting Officer, Office for Dependents' Medical Care, Office of the Surgeon General, Denver, Colorado.

Care for emotional disorders rendered on an outpatient basis is not authorized under the Medicare program.

## THE MONTH IN WASHINGTON

The House has passed legislation (HR 6675) to provide federal health care for the aged that goes much farther than the King-Anderson bill the Johnson Administration originally asked Congress to approve.

The key House vote as far as the King-Anderson provision was concerned was on substitution of a Republican insurance plan which included some features of Eldercare which was sponsored by the American Medical Association. The vote was 236 to 191 against the GOP substitute.

The vote on final House passage of HR 6675 was 313 for and 115 against.

After nearly two months of hearings behind closed doors, the House Ways and Means Committee on March 23 approved the "three-layer cake" program which included a modified version of the King-Anderson bill, a supplementary government-subsidized health insurance plan for the elderly and an extensive expansion of the federal-state Kerr-Mills Program.

The committee vote was strictly on party lines — 17 Democrats for the catch-all package and eight Republicans against it.

Despite a tremendous flood of letters from the public in favor of the AMA's Eldercare plan for comprehensive health insurance for the elderly under Kerr-Mills, the House committee didn't take a vote on HR 3727 — the Herlong-Curtis Eldercare bill.

President Johnson quickly gave Administration support to the committee bill and asked for speedy approval by Congress.

The Administration - approved legislation would provide compulsory social security coverage, effective Jan. 1, 1966, for self-employed physicians and for interns and residents.

It also would increase, retroactive to Jan. 1, 1965, social security cash benefits by seven per cent across-the-board with a minimum increase of \$4 a month for an individual.

The wage base on which social security taxes are paid would be increased Jan. 1,



1966, from \$4800 to \$5600, and Jan. 1, 1971, to \$6600.

The tax rate on the new wage bases would be increased as follows:

|                   | Self-Employed |          | Employee-Employer<br>(Each) |          |
|-------------------|---------------|----------|-----------------------------|----------|
|                   | Present       | Proposed | Present                     | Proposed |
| 1966 -----        | 6.2%          | 6.35%    | 4.125%                      | 4.35%    |
| 1967 -----        | 6.2%          | 6.50%    | 4.125%                      | 4.50%    |
| 1968 -----        | 6.9%          | 6.50%    | 4.625%                      | 4.50%    |
| 1969-72 -----     |               | 7.10%    |                             | 4.90%    |
| 1973-75 -----     |               | 7.55%    |                             | 5.35%    |
| 1976-79 -----     |               | 7.60%    |                             | 5.40%    |
| 1980-86 -----     |               | 7.70%    |                             | 5.50%    |
| 1987 & thereafter |               | 7.80%    |                             | 5.60%    |

The social security tax paid by employees and employers each would be increased next Jan. 1 from the present \$174 per year to \$243.60. The tax on a self-employed individual would be increased from \$259.20 to \$355.60.

In 1971, when the taxable wage base would be increased to \$6600, the employee and employer would be paying a tax of \$323.40 each, and the self-employed individual would be paying a tax of \$468.60.

The legislation would provide:

#### KING-ANDERSON SECTION

Eligible: Persons 65 years and older

Benefits: Inpatient hospital services for up to 60 days in semiprivate accommodations (two-to four-bed) during a spell of illness, subject to a deductible, which, until 1969, would amount to \$40.

—Post-hospital extended care services for up to 20 days during any spell of illness in a facility which has in effect a transfer agreement with one or more hospitals or which a state agency finds has attempted to enter into such an agreement. This benefit could be extended for a period of up to an additional 80 days under circumstances described below.

—Post-hospital home health services for up to 100 visits during a one-year period following hospitalization.

—Outpatient hospital diagnostic services during a 20-day period subject to a deductible equal to one-half the deductible for inpatient hospital services.

Inpatient hospital services, post-hospital home health services, and outpatient hospital diagnostic services would begin in July 1, 1966. Post-hospital extended care services would begin in Jan. 1, 1967.

#### SUPPLEMENTARY INSURANCE SECTION

Eligible: Persons 65 years and older.

Cost to beneficiary: \$3.00 a month, first \$50 of medical bills covered and 20 per cent of total above \$50.

Benefits: Payment to the individual or to the provider of services for: (a) physicians' services, and (b) medical and other health services other than those by a provider of services as defined in the bill;

—Payments to providers of services for: (a) inpatient psychiatric hospital services for up to 60 days during a spell of illness; (b) home health services for up to 100 visits during a calendar year, and (c) medical and other health services furnished by a provider of services or by others under arrangements.

—No payment could be made under this program for any services for which the individual is entitled to have payment made under the King-Anderson section.

Administration: The secretary of Health, Education and Welfare would have to enter into contracts with carriers to administer the program.

#### EXPANDED KERR-MILLS

This program would combine all the vendor medical provisions for the blind, disabled and families with dependent children under a uniform program and matching formula. The federal matching share for cash payments for these needy persons would also be increased; services for maternal and child health, crippled children and the mentally retarded would be expanded; a five-year program of "special project grants" to provide comprehensive health care and services for needy children of school age, or pre-school would be authorized; and present limitations on federal participation in public assistance to aged indi-



viduals in tuberculosis or mental disease hospitals would be removed under certain conditions.

Dr. Donovan F. Ward, president of the American Medical Association, said on House passage of HR 6675:

"The development of this bill and its passage by the House have been characterized by unrestrained haste. It is unfortunate that the American people have been denied the opportunity to learn through public hearings just how this legislation would affect their lives. The people do not understand this bill, and it is doubtful that the members of the House of Representatives can have acted with a clear comprehension of how it would affect the nation's health, how it would affect the practice of medicine or whether physicians would be able to provide high-quality medical care under the restrictions and controls it would impose on them.

"We are opposed to increasing taxes on wage earners to pay hospital bills for everyone over 65, regardless of their income. We are opposed to centralizing control over hospitals and doctors under a federal bureaucracy. We believe in helping the elderly who need help through a program, such as Eldercare, which is administered by the states, not controlled from Washington. Public opinion surveys clearly show that a majority of the American people agree with our position.

"We hope the Senate will proceed with caution and will conduct full and fair public hearings so that this bill can be thoroughly understood by everyone. We hope that the legislation which finally emerges will be sound and just, and will reflect the desires of a majority of the people." (From AMA Washington Office)

## News from Our Medical Schools

Dr. James F. Sullivan to Administer Research Under Grant—

Production of fat in the blood stream will be studied by a Creighton University physician as the result of a \$51,897 grant award-

ed by the John A. Hartford Foundation, Inc., of New York City.

Announcement of the grant to the Creighton University School of Medicine was made jointly by Ralph W. Burger, President of the Hartford Foundation, and Dr. Richard L. Egan, Dean of the Creighton University School of Medicine.

The grant-supported research program will be directed by Dr. James F. Sullivan, Professor of Medicine. Dr. Sullivan said that his research will be based on the premise that the fat content of the blood stream is a primary factor in causing arteriosclerosis. He will try to determine what factors control this fat content.

## Doctors and Medicine in the News

I see by the papers that:

Perry G. Rigby, MD, of the University of Nebraska College of Medicine, has been named as one of its 25 Scholars in Academic Medicine by the John and Mary R. Markle Foundation of New York. Dr. Rigby is assistant professor of internal medicine and anatomy and head of the section on hematology at the Eppley Research Institute. He is the first faculty member from the Nebraska College of Medicine to be named a Markle Scholar while at the medical college.

## Announcements

Technicon Announces 1965 Symposium on Automation in Analytical Chemistry—

The 1965 Technicon International Symposium on Automation in Analytical Chemistry will be held September 8, 9, 10 at the Statler-Hilton Hotel, New York City.

In announcing initial plans for the conference, Edwin C. Whitehead, Technicon president, revealed that the Technicon-sponsored symposium held in 1964 attracted more than 2,000 registrants from 44 states and nine foreign countries.

Eighty-two papers were given in what was probably the most comprehensive program ever presented in the subject field. State-of-

the-art papers included systems, methods and techniques in industrial chemistry and process control, general research, biochemistry and clinical chemistry.

"The overwhelming response to this first three-day symposium, and enthusiastic requests for a 'repeat performance' in 1965," Mr. Whitehead stated, "prompted our decision to organize a similar event this year. And in view of the many thousands of requests for reprints of 1964 Symposium papers, we are planning to publish the entire 1965 Proceedings in book form."

Admission while free, will be by pre-registration only. For further information contact Edwin C. Whitehead, Technicon, Research Park, Chauncey, New York.

#### Reviews of Medical Motion Pictures Available—

A new publication, "Reviews of Medical Motion Pictures," is now available on request from the Film Library of the American Medical Association, it was announced recently.

The publication contains reprints of all reviews of films published in the *Journal of the American Medical Association* during 1964.

"Reviews" is not a list of films approved or disapproved by the AMA. It offers a brief description and a frank, unbiased evaluation of motion pictures which are available to the medical profession.

Copies of the review publication may be obtained from the Film Library, American Medical Association, 535 N. Dearborn St., Chicago 60610.

#### A New Drug Application—

A New Drug Application has been filed with the U. S. Food and Drug Administration by Winthrop Laboratories in connection with pentazocine, described as a new non-addicting pain-killer with a potency similar to that of morphine. The search for a non-addicting analgesic has gone on for many years. Pain kills like hemorrhage, as one of us said many years ago, but even such a pearl as the relief of pain may have so high a price as to give us pause. Two

prices we hesitate to pay are addiction and respiratory depression. The report filed suggests "non-addicting characteristics" and little severe respiratory depression. These qualities would be welcomed by all of us, in the treatment of postoperative pain and for the relief of pain in terminally-ill patients.

#### Training the Patient—

The Institute of Physical Medicine and Rehabilitation, New York University Medical Center, has announced publication of Rehabilitation Monograph XXVI, "Training the Patient in the Bulb Syringe Method of Colostomy Irrigation," by Allen H. Postel, MD, W. Robson Grier, MD, and S. Arthur Localio, MD, all of the department of surgery, New York University Medical Center.

The publication is designed to assist the nurse in patient instruction in the post-operative period. It presents the details of the bulb syringe method of colostomy irrigation — a simplified and efficient technique for helping the patient manage his colostomy after surgical removal of the rectum.

The Institute of Physical Medicine and Rehabilitation, which has published the monograph, is the largest university center in the world for rehabilitation of the physically handicapped.

Copies of the 25-page publication may be obtained at 50 cents each by writing to the publication Unit, Institute of Physical Medicine and Rehabilitation, 400 East 34th Street, New York, New York 10016.

#### Wyeth Fellowships for Studies in Pediatrics—

The Wyeth Fund for Postgraduate Medical Education has announced 15 two-year Fellowships in pediatrics. The committee selects a group of physicians each year. The Fund awards each physician in the group a Fellowship of \$4800 toward a residency. For next year, the committee must receive applications by December 1, 1965. Inquiries and application requests are to be sent to the Selection Committee Chairman, Dr. Philip S. Barba, University of Pennsylvania School of Medicine, Philadelphia, Pa. 19104.



#### New President for the Industrial Medical Association—

John F. Shrouts, MD, of Minneapolis, Minnesota, became the new president of the Industrial Medical Association, succeeding Edward J. Schowalter, MD. Dr. Shrouts is Medical Director for General Mills. He is a graduate of Northwestern University School of Medicine and received a post-graduate masters degree in hygiene and public health at the University of Michigan. He has been Chief of the Division of Industrial Hygiene for the Illinois State Department of Health, director of the Industrial Medical Association, and president of the Minnesota Academy of Occupational Medicine and Surgery. He is certified in occupational medicine by the American Board of Preventive Medicine.

#### 19th Annual Rocky Mountain Cancer Conference—

The 19th Annual Rocky Mountain Cancer Conference will be held July 16-17 at the Brown Palace Hotel in Denver, Colorado. Dr. James Z. Appel, president-elect of the American Medical Association, and Dr. Murray M. Copeland, president of the American Cancer Society, will participate. The conference is co-sponsored by the Colorado Division of the American Cancer Society and the Colorado Medical Society. Speakers will include Lauren V. Ackerman, MD, Professor of Surgical Pathology and Pathology of the Washington University School of Medicine, St. Louis, Mo.; Joseph H. Burchenal, MD, Professor of Medicine, Cornell University Medical College and Vice President of Sloan-Kettering Institute, New York; Walter W. Carroll, MD, surgeon, Chicago; and Walter T. Murphey, MD, Chief, Department of Radiation Therapy, Buffalo General Hospital, New York.

Additional information may be had by writing to Rocky Mountain Cancer Conference, 1809 East 18th Avenue, Denver, Colorado 80218.

#### Community Health Week—

The AMA Board of Trustees has officially designated November 7-13 as Community Health Week for 1965. This will be the

third annual observance of Community Health Week. Primary objectives are public awareness and appreciation of the many health facilities and services available and of the many advances made locally through the efforts of the members of the community health team.

## News and Views

#### An Open Line—

The March issue of *Medical Center News* (University of Illinois) lists grants for medicine and dentistry. From the HEW and PHS they accepted \$828,628 between mid-January and mid-February. During this interval they received "gifts" totaling \$4242.

This is not very different from the listing of grants for research and training revealed in each issue of this paper. There seems to be an open line from government through which this school absorbs much of the appropriation for which these departments have some trouble to get "takers."

#### Epilepsy and the Law—

Rep. George P. Miller has introduced a bill (HR 2633) to remove the word "epilepsy" from current immigration legislation.

#### Three National Organizations Ask Increased VD Appropriation—

The American Social Health Association announced that its own group, the American Venereal Disease Association, and the Association of State and Territorial Health Officers, in a joint statement based on a national survey of the venereal disease problem, have urged Congress to appropriate 14 million dollars for the expansion of the federal program, a substantial increase from the appropriation for this fiscal year of \$10,030,000.

It was indicated that reported infectious syphilis cases rose for the seventh consecutive year, while the number of gonorrhea victims increased from approximately 270 thousand cases in 1963 to 290 thousand cases in 1964.

Resistance of some strains of gonorrhea to



penicillin, the report stated, is increasing and may some day render the drug ineffective in gonorrhea therapy; the report noted no such problem in penicillin therapy of syphilis.

## Human Interest Tales

Doctor Louis A. Sojka, Columbus, is president of the Platte County Medical Society for the ensuing year.

Doctor Floyd C. Nelson, Omaha, will serve as president of the Immanuel Hospital Medical Staff for 1965.

Doctor Robert Radin, Lyons, has opened an office in Oakland, and will spend half-days there on Monday thru Friday.

Doctor Dean M. Block, Arlington, was elected president of the Tri-County Medical Society at the group's February meeting.

Doctor Robert Heaney, Omaha, will speak at the International Symposium on Bone Diseases to be held in Tours, France, this fall.

Doctor Robert Rosenloff, Kearney, presented a paper at the Seventh Annual Science Writers' Seminar in New Orleans, on March 26th.

Doctor Rufino N. Macagba, a 1927 graduate of the University of Nebraska College of Medicine, was named "Physician of the Year in the Philippines" in March.

Doctor Charles McLaughlin, Omaha, participated in a panel at a recent Omaha Chamber of Commerce meeting, discussing the topic, "Something More Than Dollars."

Doctor J. X. Tamisiea, Omaha, was guest speaker at a Chadron dinner for the Pre-Med Students of Chadron State College, sponsored by the Northwest Nebraska Medical Society.

Doctor and Mrs. Houghton F. Elias, Beatrice, will attend the Cleveland Clinics Reunion of Former Fellows in May. Doctor Elias is President of the Cleveland Clinic Alumni Association.

## Deaths

SWIFT — C. H. Swift, Sr., MD, died February 24, 1965, at the age of 87. He graduated from the State University of Iowa College of Medicine in 1904. While a student at the University of Iowa he held the national discus record for ten years. Dr. Swift contributed much to sporting activities during his life.

## The Woman's Auxiliary

### Lancaster County Medical Auxiliary—

One hundred sixty-four doctors, residents, internes, hospital administrators and their wives welcomed spring at the Lancaster County Medical Auxiliary dinner-dance held at the Lincoln Country Club on March 27. Co-chairmen for the occasion were Dr. and Mrs. W. Q. Bradley, Dr. and Mrs. Frank Cole, Dr. and Mrs. Y. Scott Moore and Dr. and Mrs. Richard Toren.

The Lincoln University Club was the scene of the annual spring luncheon on April 5. Annual reports were given by the chairmen of the standing committees, and officers for the coming year were elected. These include Mrs. Jon T. Williams, president; Mrs. Robert Hillyer, president-elect; Mrs. C. D. Bell, treasurer.

### Dawson County Medical Auxiliary—

The Dawson County Medical Auxiliary met Friday, March 19, at the home of Mrs. Farrell Sheets, in Cozad, with twelve members and one guest, Mrs. M. J. Ayres of Gothenburg, present. Mrs. Perry reported on current legislation and suggested uses for our letters on Medicare vs. Eldercare. Mrs. P. B. Olson, Rural Health chairman, discussed plans for possibilities for changing the type of meeting held in the fall with medical students' wives. She also reported that the Medical Self-Help Kit was being used by the Methodist Youth Fellowship and Presbyterians youth groups, as well as 4-H Clubs. She announced the availability of a Pesticide Kit from the County Extension office.

Mrs. C. Hranac reminded the members

to use AMA-ERF note cards and discussed the possibility of using greeting cards. The ladies were also reminded to help the Medical Students' Wives Club by purchasing "Return Address" labels from them.

Brief reports were given by Mrs. B. W. Pyle on the Blue Cross-Blue Shield, and by Mrs. Vic Norall on "Today's Health" and the loan fund.

It was decided to extend an invitation to the state president and president-elect to a luncheon in November rather than in February next year.

The program was presented by Brian Polard, Rotarian exchangee from Australia, who showed slides and discussed informally his native country and its industries and customs. Following a question and answer period, delicious refreshments were served by the hostess.

#### Tri-County Medical Auxiliary—

The annual no-host spring luncheon and business meeting of the Tri-County Medical Auxiliary was held Wednesday, March 31, at the Fremont Golf Club. Mrs. James Bridges was elected president, and other officers include Mrs. H. H. Morrow, vice president; Mrs. G. J. Millet, treasurer; and Mrs. F. Thomas Waring, secretary. Officers this past year were Mrs. Alexander Harvey, president; Mrs. Bridges, vice president; Mrs. Waring, secretary, and Mrs. William Eaton, treasurer.

Reports on three projects of the organization were given by their respective chairmen. For AMAERF-NMF, Mrs. A. J. Merriek reported that \$600 had been given to AMAERF this past year. This amount was collected through the sale of Christmas cards and stationery, and from contributions and memorials. The auxiliary voted to give financial assistance to NMF to aid Nebraska students in health career fields.

Legislative reports were given by Mrs. Howard Yost, who explained in detail current bills which are being presented to Congress and state legislatures.

The auxiliary also sponsors two future-

nurses clubs, which is part of the nationwide effort to encourage high school students to study for careers in the health sciences of nursing, medical technology, medicine, and nutrition. Co-chairmen of this committee are Mrs. Robert Sorensen, who assists with the program for the Future-Nurses Club at Fremont Senior High School, and Mrs. William Chleborad, who works with the Future-Nurses Club at Bergan High School. Capping for the senior students will be April 8 at the Dodge County Community Hospital.

The president encouraged the members to continue their efforts in giving service to the community. The group also discussed as a future project, cooperating with the National Health Organization in distributing medical books and magazines overseas. Plans were made by the members to attend the meetings of the State Medical Association and Women's Auxiliary in Omaha, April 27-29.



## Know Your Blue Shield Plan

#### Co-ordination of Benefits and Subrogation Clauses—

There are two features that are becoming more prevalent in the health and accident field which it is felt deserve some explanation. These features are the Co-ordination of Benefits and Subrogation clauses.

The Co-ordination of Benefits provision, also referred to as nonduplication or anti-duplication, applies to group insurance only.

The administration of claims by both Blue Cross-Blue Shield and insurance companies is designed in such a way that all of the covered hospital-surgical-medical bills are paid in full by the combined group benefits. However, no additional benefits will be paid, thereby eliminating the possibility of anyone making a profit even though he has two group insurance programs. Non-covered expenses, such as blood, are not payable.

To illustrate, assume that Mrs. Jones



works for Blue Cross and her husband is employed by the XYZ Company. Both she and her husband have their dependents covered under their group plans. Mrs. Jones enters the hospital for an appendectomy and has the following expenses:

|                                             | Total<br>Expenses | B.C.B.S.<br>Benefits | XYZ<br>Benefits |
|---------------------------------------------|-------------------|----------------------|-----------------|
| 7 days at \$25.00 -----                     | \$175.00          | \$140.00             | \$105.00        |
| Operating Room, Drugs,<br>X ray, etc. ----- | 225.00            | 225.00               | 200.00          |
| TV -----                                    | 7.50              | ----                 | ----            |
| Surgeon -----                               | 175.00            | 150.00               | 100.00          |
| Anesthetist -----                           | 45.00             | 30.00                | 25.00           |
| Family Doctor, 8 Hos-<br>pital Visits ----- | 45.00             | *15.00               | ----            |
|                                             | <u>\$672.50</u>   | <u>\$560.00</u>      | <u>\$430.00</u> |

\*—Preop.

Mr. Jones' group coverage does not have a nonduplication provision. Therefore, his insurance would pay first. Of the \$672.50 total expenses, his company would pay \$430.00. Blue Cross-Blue Shield would pay the remainder, except \$7.50 TV charge since this is not a covered expense.

If Mr. Jones' coverage also has a non-duplication provision, the method of paying is by the "Prime Carrier Rule." This means that the company who insures the patient is the Prime Carrier and will pay first. In our example, since Mrs. Jones is the patient, Blue Cross-Blue Shield would pay first and Mr. Jones' coverage would then pay the difference. If he were the patient, his insurance company would be the Prime Carrier and would pay first. If the patient was a dependent, Mr. Jones' company would pay first since the company insuring the father is the Prime Carrier.

Occasionally, the other group benefits are relatively low, and the remaining expenses are greater than the maximum payable under the contract. In such cases, the other insurance benefits payable would be disregarded.

Subrogation is applied when a person sustains an injury as a result of negligence by a responsible third party. The Subrogation clause in the policy gives Blue Cross - Blue Shield the right to recover all benefits that have been paid for any expense incurred as the result of some third party's liability.

Examples of what might be subrogated are: treatment of injuries sustained in an automobile accident; injuries sustained while shopping in a department store; injuries sustained at someone's residence where the injury is due to a defect known to the home owner, and so forth.

It is to be kept in mind that payments will be made in the normal fashion even though subrogation might be involved, and there will be no delay in the processing of the claim. The recovery of the amounts paid will be between Blue Cross-Blue Shield, the third party, and/or his insurance carrier.

It is felt that the application of these two features would aid in holding down further premium increases, especially in merit rated groups. Merit rating means premiums are based on the ratio of money paid out in benefits for covered persons and their dependents vs. the money paid in premiums. The health and accident industry has now realized that duplicate coverage serves only as a means to increase premiums. A majority of the commercial companies in Nebraska have these provisions in their contracts, and it is felt that these will become more and more prominent in the future.

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#### Primary Organ Involvement in Intrathoracic Hodgkin's Disease — E. H. Meese et al (Naval Hosp, Jamaica, NY). Dis Chest 46:699 (Dec.) 1964.

Four rare cases of localized Hodgkin's disease involving the intrathoracic organs are presented. Despite differences in prognosis between pulmonary and thymic types, all tumors had essentially the same histological pattern. The possibility that Hodgkin's disease localized in the thymus may be a primary thymic neoplasm is discussed. That the thymic involvement is more common than previously realized is evidenced by a report of three patients who sought treatment within a two-year period. Adequate therapy for localized Hodgkin's disease consists of total excision and postoperative radiotherapy, but its effects must be considered more palliative than curative.





# Books



**"Chemical Carcinogenesis and Cancers"** by W. C. Hueper, MD, and W. D. Conway, PhD. Published 1 March 1965 by Charles C. Thomas, Springfield, Illinois. 744 pages (6½" by 9½") with 158 tables. Price \$20.00.

Dr. Hueper is Chief of the Environmental Cancer Section of the National Cancer Institute at Bethesda, Maryland. Dr. Conway is Former Senior Chemist of the Environmental Cancer Section.

These authors describe the nature and types of carcinogenic chemicals and the cancer hazards associated with them as well as the products, industries, environments and population groups affected by them. The various chemicals showing carcinogenic properties to man and experimental animals are classified and analyzed as to their composition and structure in relation to carcinogenicity, causative mechanism and metabolism. Detailed information is given on general principles of chemical and biologic screening methods and bioassay techniques for testing chemicals for carcinogenic properties.

This is a guide that should be in the hands of all chemical and biologic investigators, public health agencies, legislatures, industrial technologists and managers. In addition it will interest many members of the medical and legal professions.

**"Aids to Ethics and Professional Conduct for Student Radiologic Technologists"** by James Ohnysty, RT. Published in 1964 by Charles C. Thomas. 129 pages (6½" by 9½"). Price \$3.75.

The author is a member of the Department of Radiology at the St. Francis Hospital in Colorado Springs, Colorado. Although hundreds of volumes have been written on the theory and technique of radiologic technology, this study is the first to focus on the practical aspects of ethical and professional conduct. This book will be of interest to all those doctors concerned with the training of radiologic technologists.

**"The Immunochemistry of Cancer"** by Eugene D. Day, PhD. Published 10 December 1964 by Charles C. Thomas. 170 pages (6½" by 9½") with 53 tables. Price \$6.75.

The author is an Associate Professor of Immunology at the Duke University School of Medicine. This book is concerned with three topics:

1. Serological search for specific antigens of cancer
2. Antigenic transformations as expressions of malignancy
3. Immunochemical design of therapeutic and diagnostic anticancer agents

Descriptions of the technique of analytical immunofiltration, the preparation of radioantibody

tiddue-localizing reagents, and the mathematics of antibody absorption are given. The author tells of the serological search for specificity and describes 15 different examples of cancer-distinctive antigens. The few instances in which cancer-distinctive lipids and proteins have been isolated and immunochemically characterized are particularly emphasized — providing guides for the systematic characterization of other antigens in future work.

**"Burns — a Symposium,"** compiled and edited by Leon Goldman, MD, and Richard E. Gardner, MD. Published 10 January 1965 by Charles C. Thomas. 191 pages (6½" by 9½"). Price \$7.75.

Dr. Goldman is Chairman of the Department of Surgery at the University of California School of Medicine in San Francisco. Dr. Gardner is an Assistant Professor of Surgery at this same school. Their book contains the proceedings of a symposium presented by nine faculty members in their own school and eight guest participants. Papers presented and discussed included the following:

- a. New Views of Metabolic Stress: Fluid and Electrolyte Metabolism
- b. The Nutritional Problem
- c. Closed or Open Therapy?
- d. Present Views of Burn Dressings
- e. Radiation and Chemical Burns
- f. The Acceleration of Repair
- g. Burn Infections: Pathogenesis and Attempts at Control
- h. Modern Control and Treatment of Respiratory Complications
- i. Our Newer Knowledge in Skin Grafts
- j. Homografts and Transplants

**"Problems of the Aged"** compiled and edited by Clyde B. Vedder, PhD, and Annette S. Lefkowitz, EdD. Published 25 November 1964 by Charles C. Thomas. 259 pages (6½" by 9½"). Price \$7.50.

Twenty-four authors discuss in this book the many conditions which create frustration and anxiety for older citizens — retirement fears, deprivation of status, insufficient income, persistent illness, and economic inflation.

Old age may always have been a personal problem but only with the recent medical advances which have lengthened the span of life has "old age" become a social problem. The existence of millions of elderly people is a new phenomenon.

This book should be of interest to sociologists and all those in contemporary society who are concerned with finding for the aged generation new solutions for conditions that until now have seemed to defy substantial improvement.

"Control of Glycogen Metabolism — a Ciba Foundation Symposium" edited by W. J. Whelan, DSc. Published in December 1964 by Little, Brown and Company of Boston. 434 pages (6" by 8½") with 72 illustrations. Price \$12.50.

Twenty-seven eminent authorities and investigators from England, the United States, Sweden, France, Scotland, Argentina, Russia, and Spain attended this symposium and presented papers and took part in discussions concerned with the control of glycogen metabolism. Titles of papers presented included the following:

- a. The structure of glycogen and its amylolytic degradation
- b. Intestinal hydrolysis and absorption
- c. Branching enzymes
- d. The structure and influence of phosphorylases
- e. The regulation of glycolysis in skeletal muscle
- f. Clinical manifestations of glycogen storage diseases
- g. Glycogen synthetase deficiency

—F. M. Nebe

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DOCTOR — Does your wife like to read the Auxiliary news? Then be sure and take your copy home.

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Analysis of 460 Fatalities from Venomous Animals in the United States — H. M. Parrish, *Amer J Med Sci* 245:129 (Feb) 1963.

There were 460 fatalities from venomous animals in the United States from 1950 through 1959, an average of 46 deaths per year and an average annual death rate of 0.28 per 1,000,000 population. Hymenoptera insects (bees, wasps, hornets, yellow-jackets, ants) killed 229 (50%) persons, poisonous snakes killed 138 (30%), and poisonous spiders killed 65 (14%). Scorpions, Coelenterata, sting-raays, and unidentified venomous animals also caused deaths. Two spider bite deaths were caused by brown spiders (*Loxosceles reclusus*); whereas *Latrodectus* spiders caused the other spider bite deaths. Usually several hours elapsed before people died from bites by venomous snakes and spiders. Most deaths from Hymenoptera insect stings took place within one hour and resulted from insect allergy. Most fatalities from venomous animals happen from April through October.

## ORGANIZATIONS, NATIONAL

### American Academy of General Practice

Mr. Mac F. Cahal  
Volker at Brookside  
Kansas City 12, Missouri

### American Academy of Pediatrics

E. H. Christopherson, Secy.  
1801 Hinman Ave.  
Evanston, Illinois

### American College of Legal Medicine

Glenn W. Bricker, M.D., F.C.L.M., Secretary  
1003-06 Medical Tower  
Philadelphia 3, Pennsylvania

### American College of Obstetricians & Gynecologists

Craig W. Muckle, M.D.  
1806 Garrett Road  
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### American College of Physicians

Edward C. Rosenow, Jr., M.D., F.A.C.P., Secy.  
4200 Pine St.  
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### American College of Radiology

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### American College of Surgeons

John P. North  
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### American Diabetes Association

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### The American Society of Clinical Pathologists

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### Arthritis and Rheumatism Foundation

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Chicago 10, Illinois

### National Multiple Sclerosis Society

257 Park Avenue South, New York 10, N.Y.



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**American Red Cross**  
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**Cerebral Palsy Association of Nebraska**  
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201 South Elmwood Road, Omaha

**Creighton University School of Medicine**  
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302 North 14th, Omaha, Nebraska

**International College of Surgeons**  
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612 Medical Arts Building, Omaha 2, Nebraska

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**National Foundation, Inc.**  
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# THE NEBRASKA STATE MEDICAL JOURNAL

## THE STATE MEETING

The 1965 Annual Meeting of the Nebraska State Medical Association has come and gone. It was a good meeting and it was well attended. The scientific session was of a high caliber, and as the practice of medicine becomes so much more precise and efficient, a curious paradox comes into being, and our image wanes as we improve. When we wrote learnedly of the humors of the body and of the vapors of the Susquehanna valley, and when we laboriously dashed off six-line prescriptions in Latin, we were the kindly old doctor. Now we order one drug and it is specific and we save lives that were lost years ago and we too often lose our friends. But it is good to note that our meetings are different from other people's conventions. They are, as was this one, largely scientific, and devoted, not to salesmanship and to money-getting, but to the research with the single aim of helping people.

We were particularly impressed by the many apparently tireless Association officers and committee members who must have become at least as tired working hour after hour in committee rooms as did those who attended the exhibits and lectures. The talks given by our retiring and incoming presidents, our secretary-treasurer, and our executive secretary that explained how our Association works and what it had done during the past year, were especially informative. We were immensely pleased by Senator Curtis' and Doctor Ward's addresses, and were reminded of Churchill's "Never give in." We thought, too, of Tennyson's unforgettable lines: "To strive, to seek, to find, and not to yield."

Let us call our reader's attention again to the fact that our conventions are largely scientific and altruistic, and that these scientific sessions were particularly good. Our thanks to the Omaha-Douglas County hosts.

It is still good to be a doctor.

## THE DOCTOR AT COURT

Medicine and law are two of what are sometimes called our noblest professions.

Aside from the fact that both are often a help to mankind, there is usually little enough to connect them. When they do meet, it means almost always that the doctor is not in the hospital, where he feels at home, but in the courtroom, where he does not. The role of the physician as witness has been discussed over and over again. In this issue of the *Journal*, we introduce two articles dealing with this situation. We may none of us be expert in these matters, particularly since the meeting of doctor and lawyer is what we consider of a legal nature, rather than what we think of as medical. Occasionally we meet someone who has both medical and legal training, but one does not always know if he is practicing medicine or law. We present here two articles, by practitioners of both professions. We may find ourselves agreeing wholeheartedly with what they say or we may not.

Reason is the life of the law, said Coke, but Dickens' Mr. Bumble thought otherwise. "If the law supposes that," said Mr. Bumble, . . . "the law is a ass, a idiot." Let us see.

## THE MOST IMPORTANT PERSON

Businesses are owned, often by one person at the start, commonly by a group of investors or even by a horde of stockholders. They are started, and they exist, to earn money. In order to do this, they must provide a service of some kind, often necessary, sometimes trifling. They are controlled, when large, by boards of directors who are generally paid.

Hospitals are started with only one purpose, to serve people. They usually earn no profit. When private businesses show no profit, they cease to exist. Hospitals strive always to stay on the sharp nonprofit but no-loss line; they must not cease to exist. They are controlled by governing boards whose members are usually unpaid, who set policy and who may delegate various responsibilities to the administrative and the medical staffs. All of which brings us back to this. Just what do we mean when we say

"the hospital," and who owns the hospital? *Cui bono?* Is the hospital the physical plant, a nonprofit financial structure, a governing board and its administrator, or the doctors who treat patients there? It may be none of these. It is a city that springs to life in the middle of the night. It is a warehouse of medical and surgical equipment. It is even a hotel, a laundry, and a restaurant. It is an instrument of civilization, peculiarly designed to relieve pain and to extend people's lives. It is often owned by the people whom it serves.

There are some seven thousand hospitals in the United States. Very nearly half of these are voluntary hospitals, that is, hospitals operated by a church or nonprofit association. We must recall the dedication ceremony and hear again the wonderful and so-true words. We need to remember that the hospital was built for the patient. It is his life-saving home when he needs one, and he is always our guest. Who is the most important person in the hospital, the old question ran. The doctor, the administrator, the trustee, the nurse?

Or the patient?

### THE ONE-PINT TRANSFUSION

A considerable amount of controversy has appeared in the literature during the past half-dozen years, both with regard to the safety of blood transfusion and concerning the wisdom of administering a single pint of blood. The greatest factor contributing to the mortality rate of transfusion has until fairly recently been thought to be incompatibility reaction, and the fatality incidence has been given as "one in one thousand to one in three (or five) thousand." These figures are far too old to be used now; being obtained during the 1917-1941 period. The phrase itself is put inaccurately; a percentile evaluation is easier to understand and to deal with. A 1960 study of 217 thousand transfusions estimated the death rate at 0.00046 per cent. The risk of hepatitis is more difficult to judge; the incidence has been thought to be 0.2 to 0.8 per cent

(including fatal and nonfatal cases); its hazard has been taken into consideration only fairly recently. It is curious that after altering the "one in one thousand to one in five thousand" evaluation of incompatibility fatalities, the very same phrase is being applied to the danger of hepatitis, which was not formerly considered.

The philosophy of avoiding the one-pint transfusion leads to interesting thought processes. "If you are going to give one pint of blood, give two," we are sometimes told. But this cannot be what the authors have meant. The original thought must have been, "If you are not going to need two pints of blood, don't give one." The need and the loss are not always the same. The patient who has lost one pint of blood may need two, or he may need none. And of course it is not always easy to tell when blood is being lost at the start of a surgical procedure, while the blood pressure falls in an obvious relation to the bleeding, that only one pint will be lost (and therefore needed).

Certainly, don't give blood when it is not needed, and certainly, don't give too much blood. But what is too much blood? If the proper amount is one unit, then two units are too much. But what shall the unit be? A drop is obviously too small, and a gallon is surely too large. But the whole objection to the one-pint transfusion may be due to the fact that blood has for years been put up in pints. If it had not, we might now be hearing criticism of the single 100-ml transfusion or of the one-quart transfusion.

Sincere and industrious workers may argue both sides of the question, but they do meet on a middle ground: give blood only when needed and no more than is necessary. And there may well be a place for the one-pint transfusion. We may not know at the start that the patient who is bleeding briskly and is becoming hypotensive is going to lose no more blood after we have started a much-needed transfusion. It is a little like the instructions on the seed package, telling us to plant after the last snow. If we only knew!



## OUR EDITORS

As accurately as we can determine, with the good help of our Executive Secretary and his able assistant, we have been preceded by five Editors of the Nebraska State Medical Journal. They were Doctor I. S. Cutter, who assumed this office in 1916; Doctor J. M. Aikin, who began in 1918; Doctor F. A. Long, who took over in 1921; Doctor Jahr, whose term started in 1938; and Doctor G. Covey, who became Editor in 1952. The words of new office-holders are often trite but sometimes true; it is considered a great honor and they hope to be worthy and so on.

We do consider it so, and we do hope to do as well. We just wanted everyone to know our Editors' names.

## HALOTHANE AND THE LIVER

No man is an island, it goes, yet if we seem to wear two hats this month, it is not deliberate. The article that appears later in this issue with this title is controversial; it was meant to be so, and so to provoke thinking on both sides of the question. As we seek truth more and victory less, as Spencer said, we shall become more anxious to learn what it is that leads others to think as they do.

It is annoying, after setting up and carrying out a medical experiment, and turning it over to a statistician sitting in an office building, seeing no patients, knowing nothing of medicine, to have him tell you that the study was not properly set up and that the author's conclusions are not valid, and that his statistical proofs are not really proofs. It is easy to reject his criticism and to say that he knows nothing of medicine. It is not easy to realize that he does not need to know medicine, and that, since the problem is statistical, his criticisms are perfectly correct.

The problem is not one for any single physician to decide; he cannot possibly do this; it is one that is better left to the statistician. It makes no difference how many people like or dislike a substance; that does not determine its hepatotoxicity. Nor

does the number of doctors who believe or who doubt that smoking causes cancer establish or deny the connection. It is like Lincoln's asking if calling a dog's tail a leg makes it one, and something like the story of the children who voted to decide the sex of their cat.

It is not only easy to rationalize; it is impossible to avoid doing it. When we do anything one way, we invent reasons, and we come to believe them, for doing what we do. But if we set out to prove nothing, and only to seek the truth, and if we count enough cases, which is our only way of finding out what nature is up to, we may yet triumph.

## OPERATION GLEAN

The house of Delegates of the Nebraska State Medical Association (NSMA) did an outstanding piece of work, at their meetings during the recent Annual Sessions, in relation to the "Medicare" bill now pending before the U.S. Senate. Senate action on this bill will undoubtedly be completed before this editorial reaches your desk. Changes still may be made in the bill before it reaches the final vote, changes that might be either favorable or unfavorable toward doctors and hospitals.

As the bill now stands, the Secretary of Health, Education and Welfare (HEW) will have complete authority to direct the manner in which the law will be implemented in practice. Unless some restraint is placed on this autocratic method, the State Medical Association will stand little chance of influencing any actions of the Secretary which might be particularly bad for the people or the doctors or both.

In any case, the association should be prepared to meet and deal with this and other portions of the bill before it becomes too late — trying to change the rules after the game has begun is less successful than before the game begins. Obviously a person or group of persons which solidly represents the NSMA is likely to be more potent in presentation of our point of view than many

(Continued on page 344)



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## Comments From Your President

The majority of the members of the Nebraska State Medical Association started their medical careers and carried on in Nebraska because this state presented the demands, opportunities and the rewards that are essential to a good life. Most of the physicians have carried on with the duties of an active practice and a charity load. They have truly made real contributions to their communities and to their states. From one national administration to the other there has been some understanding and no interference with what the individual physician felt was his duty to his patients and to his community.

In the last three months there has been an abrupt change in what the future may hold. We find that we are presented with a law that clearly gives the Secretary of Health, Education and Welfare the ultimate authority to determine the nature of, quality of, and payment of whatever professional services are rendered. This is a clear departure from the Nebraska system of medical care. Most of us fear the domination of personal medical care by such a powerful federal agency as Health, Education and Welfare. The responsibility of control of the type and cost of medical care must remain with those who actually provide and render the care of the sick patient.

To add to our problems, the Nebraska Hospital Association, representing the 131 Nebraska hospitals, augmented the dilemma when they strongly urged Senator Carl Curtis to have radiology, pathology, and anes-



thesiology included as hospital services. In their report to him they stated that it would be virtually impossible to provide complete hospital care without these services being included as hospital services. This is not factual. It further belittles every physician. This stand is completely contrary to the stand which the House of Delegates of the Nebraska State Medical Association took at their annual session in April of 1965. There must be "a return of understanding" between the Nebraska Hospital Association and the Nebraska State Medical Association because our problems are the same. Neither can be dominated by a powerful federal agency.

Willis D. Wright

# "The Battle of The Experts:"

## A NEW APPROACH TO AN OLD PROBLEM IN MEDICAL TESTIMONY

*(First of Three Installments)*

OVER a century has passed since  
the poet mused,

"When doctors differ, who decides  
Amid the milliard-headed throng."<sup>1</sup>

Since then, the phenomenon of conflicting medical testimony has increased rather than diminished. Poets can ponder, but the bench and the bar must decide.

The testimony of medical experts is essential in establishing the extent of a plaintiff's injuries in personal injury litigation. The Anglo-American approach to evidence assigns to the litigants the role of uncovering and producing evidence. This information is provided by witnesses, among whom are doctors called by the opposing parties. Conflicting or contradictory testimony is often presented, and a phenomenon develops dramatically labelled "the battle of the experts."

The possible adverse consequences of this medical-legal phenomenon cause constant consternation among the litigants and courts and the professions and public. As a result, judicial, legal and medical groups in several jurisdictions have collaborated to create programs aimed at resolving or minimizing these courtroom conflicts. One approach which has met with much success involves the establishment of neutral panels of outstanding specialists in various branches of medicine. These experts are available at the call of the court to perform examinations of plaintiffs in personal injury cases, report their findings and, if necessary, testify in those cases where the medical aspects are controversial.

In order to ascertain whether such a program would benefit judicial administration in Nebraska, research was undertaken in the fall of 1964.<sup>2</sup> Over three hundred judges,

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Omaha, Nebraska

attorneys and physicians were contacted,<sup>3</sup> and their reactions to the adoption of such a plan are charted below. This survey is believed to be representative of the members of the medical and legal professions who are most involved in the litigious process in Nebraska:

|                      | In Favor | Against | Undecided |
|----------------------|----------|---------|-----------|
| Omaha-Lincoln        |          |         |           |
| Judiciary -----      | 6        | 0       | 1         |
| Outstate             |          |         |           |
| Judiciary -----      | 6        | 3       | 0         |
| Omaha Bar -----      | 27       | 27      | 2         |
| Lincoln Bar -----    | 13       | 14      | 0         |
| Outstate Bar -----   | 37       | 25      | 0         |
| Medical Profession - | 29       | 3       | 1         |

Two additional results were evidenced in the legal profession. First, many outstate attorneys favored the basic idea of the plan but voted against its actual implementation in their districts feeling the necessary personnel were absent. Secondly, cleavage was evident throughout the state between the ranks of plaintiff and defense counsel, the great majority of the former opposing and the preponderance of the latter supporting the project.

This article is intended to discuss a general problem and to propose a specific solution. But this research seeks only to treat the performance of doctors once they enter the legal arena. The primary objective is to comment on medical testimony, not medicine

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itself, though often they are inextricably intertwined. Wherever appropriate, quotations from Nebraska judges, attorneys and physicians are tied in with authorities and relevant data obtained from other jurisdictions. It is hoped that this will be informative of the state and national consequences of "The battle of the experts."

## I. THE HISTORICAL EXISTENCE OF THE PHENOMENON

The *British Medical Journal*, dated May 2, 1863, observed:

Medical evidence delivered in our courts of law has of late become a public scandal and a professional dishonour. The Bar delights to sneer at and ridicule it; the judge on the bench solemnly rebukes it; and the public stand by in amazement; and honourably minded members of our profession are ashamed of it.<sup>4</sup>

This criticism of the "battle of medical experts" in England was paralleled in the United States by the highest Court in our land:

Experience has shown that opposite opinions of persons professing to be experts may be obtained to any amount; and it often occurs that not only many days, but even weeks are consumed in cross-examination, to test the skill or knowledge of such witnesses and the correctness of their opinions, wasting the time and wearying the patience of both court and jury, and perplexing, instead of elucidating the questions involved in the issue.<sup>5</sup>

Unnecessary divergence in such testimony continued to increase at the turn of the century. Judge Learned Hand noted in the *Albany Medical Journal* of 1900 that "... the present system in the vast majority of cases ... is a practical closing of the doors of justice upon the use of specialized and scientific knowledge."<sup>6</sup> Dr. J. W. Courtney in addressing the 1915 graduating class of the Harvard Medical School warned that "The army of witnesses on either side is generally appalling ... They are of two hostile camps, and prepared to attempt, under solemn oath, to uphold opinions diametrically opposed, yet supposedly derived from a single series of facts and observations."<sup>7</sup> Being of the opinion that this class of evidence is one of the most unsatisfactory and unreliable parts of judicial administration, commentators on the law of evidence have

more recently deplored medical experts becoming the hired champions of one side or the other.<sup>8</sup> And the professional groups implicated have viewed the problem as serious enough to warrant action. The American Medical Association officially recognized the problem of testimony disputes and advocated ways to deal with it in 1926.<sup>9</sup> The American Bar Association endorsed the New York method of resolving wide conflicts in medical testimony in 1956.<sup>10</sup>

More specifically, expert medical skirmishes in the courtroom have not escaped the critical attention of our Nebraska Supreme Court. In *Lincoln Telephone and Telegraph Co. v. Smith* the testimony was in direct conflict, and since the Court could not accept both versions, it attempted on its own to take "the better view of the evidence."<sup>11</sup> *Flesch v. Phillips Petroleum Co.* revealed that "the trial in the district court on the main issue was a contest between expert (medical) witnesses."<sup>12</sup> In *Lowder v. Standard Auto Parts* the medical evidence was "diametrically opposite," and the trial was criticized for again showing that litigation can "degenerate into a medical experiment in judicial credulity and a judicial speculation in medical credibility."<sup>13</sup> In *Schmidt v. City of Lincoln* three prominent physicians opined that the claimant was not suffering from any disability attributable to the accident, but the Court nevertheless found he was totally disabled.<sup>14</sup> *Crececius v. Gamble-Skogmo, Inc.* again evidenced drastic medical disagreement wherein the plaintiff's three doctors testified that he suffered injuries that would eventually disable him and which would grow progressively worse during his life. On the other hand, testimony of the defendant's three doctors indicated "that there has been a complete recovery and that there will be no after-effects."<sup>15</sup> Such cases in Nebraska involving medical disputes were summarized as uncovering "... a painful canker in the body of the law of evidence which has been festering for many decades to the great discomfort of doctor, lawyer, and laymen alike."<sup>16</sup>

Current medical disputes in the courtroom arise with sufficient regularity so as to cause concern among members of our bench, bar



and medical profession. A mid-state district judge complains "... there are too many cases now in which there is a hopeless conflict in medical testimony." A Beatrice attorney advocates that "... some procedure needs to be put into operation to get away from this senseless procedure whereby so-called experts are permitted to give conflicting testimony on the nature and extent of injuries. It is damaging to all concerned." An Omaha district judge likewise refers to "... many disappointing experiences prior to and during litigation." An Omaha orthopedist is certain that "... some solution need be sought to the occasional problem of conflicting medical testimony."<sup>18</sup> A Lincoln district judge states that "The conflicts in medical testimony in personal injury cases are notorious obstacles in the administration of justice. Reform is needed urgently." These instances bear witness that medical testimony has waxed so divergent as to warrant close scrutiny. The "battle of the experts" continues to haunt our courts.

## II. THE CAUSES OF THE PHENOMENON

Before undertaking any solution, the potential causes of conflict in expert testimony, both legal and medical, must be closely analyzed.

### A. Nonmedical Causes

Due recognition must be given to the fact that our legal system and its participants play a substantial role in perpetuating the conflict in medical evidence. Treatment of the nonmedical causes should add perspective to the nonmedical causes.

(1) *Courtroom atmosphere and procedure.* An Omaha physician states that "... much of the confusion produced by conflicting medical testimony arises from the ignorance of the medical profession about legal questions and how to conduct themselves in court." Dr. Manfred Guttmacher explains:

"The courtroom setting, which is so familiar to lawyers, is to most physicians uncongenial, and in many respects even repulsive. . . . That truth, in legal cases in which medical issues are of paramount importance, should be reached by

biased partisans noisily developing certain facts and skillfully concealing others, through resorting to esoteric and highly structured and restrictive formulas . . . is to him a baffling phenomenon."<sup>19</sup>

One of these "restrictive formulas" is the hypothetical question regarding which an Omaha physician remarks that "it has always seemed incongruous for a medical fact-seeking person to try to operate within a legal fact-finding framework." It is indeed ironic, as Dean Wigmore observed, that the hypothetical question, which is truly one of the scientific features of the rules of evidence, should be the feature which most disgusts men of science with the law of evidence:

The hypothetical question, misused by the clumsy and abused by the clever, has in practice led to intolerable obstruction of truth. In the first place, it has artificially clamped the mouth of the expert witness, so that his answer to a complex question may not express his actual opinion on the actual case. This is because the question may be so built up and contrived by counsel as to represent only a partisan conclusion. In the second place, it has tended to mislead the jury as to the purport of actual expert opinion.<sup>20</sup>

In the wake of such criticism many have urged that, unless required by the trial judge, the hypothetical question should be dispensed with. Indeed there is a rule gaining wider acceptance today which provides for dispensing with the hypothetical statement of facts where the medical expert has firsthand knowledge of the facts upon which he is to base his opinion.<sup>21</sup>

(2) *Communication difficulty.* Communication problems based on interpretation of terms and questions exist both within and between the professions. Dr. Andrew S. Watson capsules this interprofessional problem as it exists in psychiatry:

There very often will be considerable disagreement between psychiatrists in the choice of labels, even though all may tend to agree on the clinical findings which they observe and which lead to the process of labeling. This is an important fact in evaluating the "battle of the experts." The "battle" often has to do more with the decision of labeling than it does with the observation and description of the elements which lead to the label choice.<sup>22</sup>

Trauma is a term in personal injury litigation very susceptible to such exaggeration

of confused theory. Trauma has many dimensions and it is variously defined. It seems to blend with many subjects which are in themselves highly comprehensive and underdeveloped. Professor Curran attributes the source of confusion:

... the difficulty of communication here between lawyers and physicians can be traced again to basic methodology. The lawyer is thinking about the significance of events isolated for the purpose of logical study. The physician, on the other hand, is examining the events empirically or experimentally. He is interested only in what effect the event has on the body.<sup>23</sup>

(3) *Contrasting attorneys' stratagem.* "The damages issue in a personal injury case is basically economic, not medical. Even those factors dependent on medical proof must be measured and evaluated in dollars and cents."<sup>24</sup> Such evaluation is the accepted stratagem of lawyers in their role as professional partisans. A Lincoln orthopedist therefore believes that

... a lot of these problems in the courts come not so much from the fact that there is disagreement between the medical experts, as from certain attitudes on the part of the litigants. Their interest seems to be directed more at what can be done with the jury's attitude toward a given set of facts than what the actual set of facts is.

Carried to extremes occasions arise when claims are often "so magnified and distorted that the medical witness who supports them can find little or no justification for his testimony in favor of them."<sup>25</sup>

## B. Medical Causes

(1) *Authentic individual differences of opinion may result from case to case when medical knowledge does not provide clear-cut solutions.* Assuming that the doctors involved are equally competent and speaking impartially with no thought of the effect of their words on the outcome of the litigation, there are areas such as differential diagnosis, causation, disability and prognosis where legitimate divergence in medical opinion exists.<sup>26</sup> Dr. James W. Brooke explains:

... different doctors given the same set of circumstances but judging from different backgrounds of experience may honestly and competently arrive at different conclusions. By the same token differing estimates of dis-

ability may be submitted by each of several examining experts although it is quite likely that they will not be grossly different.<sup>27</sup>

Granting that these are based on complex data and are opinions, not facts, exaggerated polar disagreements still should not take place. Dr. Nicholas Gotten attests that the real difficulty in evaluating whiplash injuries is due to the complicating factor of monetary compensation: "... there was a wide divergence among the surgeons as to the severity of the injury and as to the future prospect of health ... symptoms did not adjust to treatment ... but improved after settlement of claims."<sup>28</sup>

(2) *"Schools of Thought" legitimately exist in significant fields to compound the inherent difficulty of honest differences of opinion.* These are fields of medicine where medical opinion may be diametrically opposed and still be honest and sincere because eminent and respectable medical authority is sharply divergent.<sup>29</sup> This does not involve opinion which may vary from case to case, but rather involves steadily held conceptions or preconceptions, each of which is usually supported by impressive authority. In reality the experts become partisan, not to an individual plaintiff or defendant, but to a point of view. Some better known areas are:<sup>30</sup>

1. Whether a single mechanical trauma can produce cancer in a susceptible individual or aggravate pre-existing cancer?
2. Whether mechanical trauma can precipitate metastasis and thus convert what may be an otherwise favorable situation into a hopeless one?
3. Whether post-concussion syndrome has organic or functional causes or both? Whether the symptoms are neurotic or traumatic in origin?
4. Whether a normal appendix can be injured by means of a severe non-penetrating blow to the abdomen?
5. Whether a real risk is involved in myelography?

Others include neoplastic diseases; myocardial infarction due to trauma; the effect of stress on coronary thrombosis; the effect of trauma on multiple sclerosis, Parkinson's disease, and arthritis; the lumbago, sacroiliac and lumbosacral strain school as opposed to the ruptured intervertebral disc school in back injuries. It must be emphasized



that the differences of opinion and disputes between schools of thought are not of the bar's making. They are the outcome of a physician's self-commitment to a particular view. "They simply echo the controversies between men of unquestioned competence and integrity within the field of medicine itself."<sup>31</sup> However, cases revolving around such disputes are relatively infrequent.<sup>32</sup> When they arise, our courts have long admitted the testimony of practitioners from other schools of practice.<sup>33</sup>

(3) *Actual incompetence and inequalities in competence.* All doctors who testify are not equally competent. Ten years ago the first one hundred cases reviewed by the New York panel of experts were analyzed. "Ignorance" was "the most charitable interpretation" that could be assigned to many of the serious misinterpretations of X-ray findings, failures to examine spinal fluid in concussion cases, lack of myelogram reports and electroencephalographic recordings in fracture cases.<sup>34</sup> Similar experiences in X-ray cases led a leading roentgenologist to conclude that "misinterpretation of anamolies of physiological changes by inexperienced men attempting to interpret films is another factor which brings many cases into court."<sup>35</sup>

As deplorably revealing and thought-provoking as are the above cases, incompetence as an actual source of medical conflict in Nebraska courtrooms is so minimal as to be practically non-existent. The medical profession does recognize varying degrees of skill among its members through boards of specialists, appointments to medical college faculties and hospital staffs. And though in a legal sense all experts must be "qualified" under state law,<sup>36</sup> initial conflict undoubtedly does arise due to varying degrees of competence between the specialist and the general practitioner. However, the survey unfolded no complaints of incompetence, let alone litigation-provoking incompetence in Nebraska.<sup>37</sup>

(4) *Intentional Dishonesty or Perjury.* This cause exists on an extremely small scale throughout the country. "Both the medical and legal professions, composed pre-

dominately of honorable and dedicated men and women, are undeservedly stigmatized by a small outlaw fringe of brazenly unscrupulous practitioners . . ."<sup>38</sup> Though the charlatan, "hireling" or "medical mouthpiece" usually becomes well-known, he occasionally contributes to scandalous verdicts.<sup>39</sup>

The problem is all but nonexistent in Nebraska. There is a noticeable vacuum of the "Paladin-type doctors" whose unwritten cards read "have loaded knowledge — will perjure." Equally applicable to Nebraska are the laudatory remarks of a Philadelphia lawyer:

. . . no such shotgun blast can be maintained with respect to prevailing conditions or procedures . . . We are fortunate in having a Bar with a tremendous esprit de corps and a justified pride in its high standards, as well as much distinguished medical talent. The vast majority of attorneys in this jurisdiction, both plaintiff and defendant, and physicians as well, do not and will not stultify themselves.<sup>40</sup>

In the consensus of Nebraska opinion the spectre of fraudulent testimony arises rarely. The few medical mercenaries who may not be adverse to travelling the low path are so relatively minimal that they render unnecessary a program aimed specifically at distortion.<sup>41</sup>

(5) *Bias* is the crux of the problem in Nebraska and across the United States.<sup>42</sup> It is the principal reason behind medical controversy in the courtroom. Though lawyers are traditionally expected to display vigorous partisanship, the American Medical Association officially sanctions a contrary standard for doctors:

. . . doctors . . . when called upon as witnesses . . . are not to consider themselves as partisans or advocates, but as scientists who are giving their best impressions of both their physical observation of the patient and their knowledge of the medical and surgical conditions under discussion.<sup>43</sup>

A substantial number of doctors become infected with bias when called as witnesses in the conventional way. "Cast in the roles of partisans, subjected to hostile cross-examination, and paid by one side, they tend to color their testimony."<sup>44</sup> The advocate's attitude takes shape in opinions expressed a little more strongly than the facts or the state of medical knowledge warrant. Or



needed reservations may be omitted when convenient. Nebraska contains too many medical experts taking sides during trials and forgetting they should be abstract in their approach.<sup>45</sup>

The inevitable result is the growth of two different types of advocate doctors — “defendant” and “plaintiff” — corresponding to the two sides of the counsel table. The members of each category soon become well-known by the bar in their area. This division between stereotyped doctors testifying only for one side or the other is not restricted to the larger metropolitan area.<sup>46</sup> A Kearney attorney capsules this impression:

Frankly, I have found most doctors do become slanted in their outlook on this matter of examination and, relatively soon in their practice, become identified with either the defendant's side of the bar or that of the plaintiff's . . . We utilize almost exclusively orthopedic surgeons, neurologists and internists from Omaha, Lincoln, Hastings and Grand Island — virtually all of these people have become rather definitely identified as either “plaintiff's doctors” or “defendant's doctors.”

As a consequence, plaintiff lawyers disparage defendant doctors,<sup>47</sup> and defense counsel decry plaintiff doctors.<sup>48</sup> The medical profession itself censures the prejudicial division.<sup>49</sup> A few areas of the state appear unscathed, but they are the exception.<sup>50</sup>

The conscious and unconscious reasons underlying these biased states of mind are several. Sympathy, friendship, misplaced loyalty, prior consultation with the party, ordinary financial attachments, special fees or the physician's basic philosophy help to color testimony in favor of one side or the other.<sup>51</sup> The line between these subjective motivations is tenuous — in most cases too fine for counsel to expose, too fine for an average jury member to discern. Confusion among them allows the existence of numerous instances of highly colored opinion ethically incompatible with loftier and established standards of the group.

A prominent Boston lawyer vehemently criticized the ensuing situation as far back as 1910:

. . . the regular court experts not only come to be tagged in the courts as “plaintiff's” ex-

perts or as “defendant's” experts, but they come in their practice more or less unconsciously to get into a chronic one-sided medical point of view. Habitually, the plaintiff's expert sees or magnifies injuries, symptoms and resultant ill effects which the defendant's experts minimize . . . altogether. The plaintiff's expert has argued and reasoned himself into a state of mind that sees in the given case just what the plaintiff's attorney needs. On the other hand, the defendant's expert sees a malingerer in every man who asks damages. It is the old story of bringing to the market what the market demands.<sup>52</sup>

### III. SIGNIFICANCE OF THE PHENOMENON

The battle of the experts must be viewed within the context of its social and economic background wherein personal injury cases constitute at least 80 per cent of the litigation in most of our courts.<sup>53</sup> The compensation awarded victims of personal injury accidents in a recent year totalled nearly four billion dollars.<sup>54</sup> This cost is bound to mount in the wake of the increased claim consciousness of the American public. Underscoring this fact are trends toward popularity of pressing personal injury claims, expansion of tort liability and a broadened concept of social responsibility tempered by capacity to bear the loss.<sup>55</sup>

Against this background the importance of accurate medical testimony becomes unparalleled. Recovery in every personal injury case hinges at least partially on medical evidence. Indeed, since it is estimated that seven out of ten personal injury cases are decided on medical considerations rather than legal,<sup>56</sup> it is evident that the battle of experts is influential in a “big business.” Four possible injurious effects dwell within this social setting.

(1) *Injustice to individual litigants through confusion of the court and jury.* Several years ago a Nebraska Supreme Court Justice expressed his frustration in trying to reconcile medical testimony disputes by remarking, “I, for one, feel the need of a compass.”<sup>57</sup> Judge Hand believed such insurmountable uncertainty is often manifest in the “. . . august assemblage of our peers when confronted with great medical controversy. . .”<sup>58</sup> Judge Jerome Frank wrote

that "... in light of the fact that juries 'try the lawyers,' it is peculiarly true, in many a jury trial, that a man's ... property often depends on his lawyer's skill or lack of it in ingratiating himself with the jury rather than on the evidence."<sup>59</sup> This is a necessary consequence of legal advocacy, but a physician's exploitation of juror's weaknesses warrants condemnation since it can work equivalent injustice. Medical conflict does not always hinder jury discernment,<sup>60</sup> but in many cases perceiving which doctors are worthy of belief is a task which places the jury in the twilight zone of just decision.

Knowing little or nothing about medicine themselves, they are ill-equipped to measure medical skill and knowledge. As far as partiality, that is so subtle and elusive that it can seldom be exposed in courts. Hence, the decision to believe one doctor over another is likely to be predicated upon nothing more substantial than courtroom manner, personality, or forensic ability.<sup>61</sup>

Recent conferences with the federal judges in the Northern District of Illinois bear out this assertion. The testifying doctor who has the greater experience in the courtroom and who is the more eloquent may win the minds of the jurors over the doctor who may give more appropriately qualified but less eloquent testimony on the matter in question.<sup>62</sup> When the men of medicine cannot convince their own brethren, a lay jury cannot be expected to consistently resolve the alleged uncertainties. Extreme poles of medical opinions undoubtedly serve as a frequent source of confusion to jurors.<sup>63</sup>

(2) *Misunderstanding and dissatisfaction between the medical and legal professions.* The reliance on partisan expert testimony has caused long standing professional discontent among doctors, lawyers and judges.<sup>64</sup> Dr. Joseph Sadusk, Jr., states that despite an ever increasing need for expert medical testimony, "Unfortunately, attorneys found that the average physician was loath of appearing in court, due to the fact that he was cast into an atmosphere foreign to his training and philosophy."<sup>65</sup> This dire reluctance in many outstanding physicians partially derives from the battle of experts:

This spectacle has so distressed many good doctors that they have refused to have anything to do with litigation. They will neither hire themselves out as partisans nor be treated as if they had. Their withdrawal, unfortunately, has only smoothed the way for less able and upright members of the profession and thus compounded the evil.<sup>66</sup>

This atmosphere of conflict has taken its toll in courtroom abstention of many outstanding doctors in Nebraska.<sup>67</sup> This reaction of reluctance sets in motion a vicious circle. Refusal to voluntarily participate in litigation in turn tends to irritate the bar.<sup>68</sup> It increases the demand for witnesses who enjoy medical advocacy. Judge John W. Yeager of the Nebraska Supreme Court describes this effect:

I have had experience in this matter of expert testimony of medical witnesses in the area of selection. The only thing in that area that ever impressed me as of any great value was a rare situation when the parties wanted an unbiased testimony and agreed that the witnesses should know nothing about the controversy.<sup>69</sup>

This process culminates in adversaries seeking doctors who are "good witnesses" and who will support extreme positions.<sup>70</sup> It often results in attempts at impugning a doctor's testimony to counterbalance the anticipated insinuations from opposing counsel. Genuinely expert witnesses are brought in to disrepute, and they and their well-qualified colleagues thereafter refrain from undergoing the same experience.

(3) *Disillusionment to laymen who are touched by court process.* Large discrepancies in medical claims are disappointing and bewildering to laymen and undoubtedly tend to diminish public faith in the medical profession's skill and scientific impartiality. "This has led to a belief by the laity ... that any plaintiff with a poor case or any defendant with a poor defense, with sufficient use of the coin of the realm, may find a medical witness to support his claim or his defense."<sup>71</sup>

There is the further public belief that if the witness is skillful in his interpretation of the facts, he may influence the jury into rendering an unjust verdict. When they see minor injuries inflated into large recoveries, and substantial injuries treated as if trivial,

they tend to lose respect for the judicial process and its participants. "They see in too many accident cases that a trial is not a sober, logical search for truth, but something that has deteriorated into an expensive, and sometimes cruel, game of chance."<sup>72</sup>

(4) *Lack of pre-trial settlement and subsequent court congestion.* In many metropolitan courts across the country the backlog of cases awaiting trial is one of the major causes of dissatisfaction with the administration of personal injury litigation.<sup>73</sup> There is a connection between this condition and the battle of the experts. Settlements are not made fast enough or on a large enough scale to keep up with the flood of litigation. In many cases the parties are unable to agree upon the nature of the injuries suffered by the plaintiff. If counsel were able to predict with reasonable assurance the medical findings which would be made in the event of trial, the areas of disagreement would be substantially narrowed.

It is always desirable to increase opportunity for settlements that tend to be equitable to both parties, but the related problem of court congestion plaguing many other jurisdictions simply does not exist in Nebraska. Delay in courts becomes a serious matter only when counsel who are desirous of and ready for trial are unable to have their cases tried within a reasonable number of months.<sup>74</sup> Based on this criterion Nebraska courts are doing a meritorious job in moving lawsuits. An Omaha defense attorney summarizes:

Actually, court congestion in Nebraska would have to be entirely based perhaps on the Douglas County-Omaha area, as we are the only large metropolitan area in which there is a big volume of trial litigation going on. Frankly, our local courts are doing an excellent job in moving lawsuits. Any plaintiff lawyer who desires and is pushing can have his client's case heard within an eight months period. This is actually soon enough.<sup>75</sup>

## END OF FIRST INSTALLMENT

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### INSECT ENEMIES

"For millions of years certain insects and other small animals with jointed legs such as spiders, mites, and ticks have been among the greatest enemies of health, well being, and happiness . . . Those that bite and sting have been feared, and justly so, for serious complications and even death may result from a bee or wasp sting if a sensitive person has been stung previously." (From *Blue Print for Health*, Spring, 1965).



# THE DOCTOR'S ROLE in *Disability Evaluation*\*†

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**D**ISABILITY is primarily a legal rather than medical problem. Unfortunately, however, this fact is not widely recognized by our courts, legislative bodies, compensation boards and insurance carriers, or by a large segment of the physician population of this country. Despite the manner in which disability may be defined by the courts or compensation boards, the actual determination of the per cent of disability in a given individual is influenced by a host of factors that are medically irrelevant. The pre-injury occupation and income of the disabled individual, his social prominence in the community, the financial status of the defendant, and a number of similar factors definitely influence the size of the award made by the court.

To a degree, it is true, these factors fail to affect the awards made by compensation boards, since the amount to be paid in such cases is usually fixed by law. Mr. Harry W. Dahl, the Iowa Industrial Commissioner, was kind enough to supply me with information pertaining to the state of affairs in this state. The Iowa Workman's Compensation Service has no table determining the permanent impairment presumed to result from the loss of given parts of the body. The tables published by the American Medical Association are frequently employed. Under the section of the Iowa Workman's Compensation Act relating to permanent partial disability, certain scheduled injuries are set out. However, where the injury is outside of the schedule, disability must be determined as a percentage of permanent total disability. Here, the test employed is the loss of earning capacity, and the Iowa Supreme Court has said that the Compensation Service must consider not only the extent of

the functional impairment but also the age, training, experience, and intelligence of the injured employee.

Throughout the country in general, the amount of the award made by a court or by a compensation board will depend, to a considerable degree, on a physician's estimate of the per cent of disability. This forces the doctor to assume a role which is unfair to him as well as to the injured individual. One of the major reasons for this state of affairs arises from the assumption that since the doctor deals with disabled people throughout much of his professional career, he is in a position to estimate their degrees of disability.

## The Degree of Impairment Isn't a Medical Question

This assumption fails to recognize the fact that disability *per se* is the *result* of being injured, and is not the injury itself. In fact, the relationship between disability and the injury which is presumed to have been its source is quite variable in different individuals and in different situations. I hope to point out in this paper that whereas the physician may be considered an expert regarding the physiologic and anatomic deficits resulting from an injury, he is in no position to determine the per cent of disability arising from an injury.

Two recent reports in the literature<sup>3,4</sup> attest to the fact that the opinion of an individual physician regarding the per cent of disability in a given instance is quite arbitrary and has no significant correlation with the opinion of another physician. The figures presented in these reports were based on a survey of a large number of neurosurgeons. These indicated that with respect to specific neurologic residuals, the opinions of the respondents as to the per cent of disability frequently ranged from zero to 100 per cent. Although in some instances there

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was a tendency for the opinions to be grouped at one end of the range, in general they fitted fairly typical Gaussian distribution curves. Such reports make it obvious that no reliance can be placed upon the opinion of an individual physician, and it therefore follows that such an opinion should not be used to determine the amount of an award made to a claimant for an injury.

Although I do not wish to argue the merits of our cultural philosophy which approves the practice of granting monetary recompense to an injured individual, I should like to point out that this philosophy gives rise to one of our greatest legal paradoxes. If one person murders another, he may be jailed and/or executed, but he is never forced to make financial restitution to the family of the murdered individual. However, if one person kills another accidentally and is adjudged negligent, he must make financial restitution even if, in so doing, he jeopardizes his own security and that of his family.

#### **Degree of Impairment Can't Be Accurately Determined**

Having established the premise that disability is the *result* of being injured, I ask you to consider the various factors that are operative in post-traumatic disability. Broadly, these may be divided into two groups: the intrinsic medical factors and the extrinsic socio-economic factors. We shall consider the intrinsic medical factors first, since they fall more properly within the realm of the physician. Manning *et al.*<sup>4</sup> indicate that this will involve a consideration of, "... those alterations from the 'normal' physiological performance potential of organs or tissues which result directly from bodily injury or from the complications thereof." For the sake of discussion, we shall accept the premise that a physician can be considered an expert in these matters. However, a fallacious interpretation of this premise on the part of jurors, members of compensation boards, and insurance adjusters has given rise to much of the difficulty involved in the problem under discussion. Many of these individuals assume that since a physician is expert in determining alterations from the normal physiologic perform-

ance potential, he should be able to give an accurate figure for the per cent of total body function represented by the loss or impairment of function that has befallen a specific portion of the body. To many, this figure is directly equatable with a per cent of disability, and even those who do not directly equate the two are inclined to place undue emphasis on the percentage loss of bodily function in determining the per cent of disability. I maintain that no reasonable or accurate percentage figure for loss of bodily function can be determined.

What kind of logical value system can be set up to determine accurately the per cent of total body function represented by the index finger, by the upper lobe of the right lung, by twelve inches of terminal ileum, or by the right frontal lobe of the brain? Any figure used must obviously be quite arbitrary. Many compensation boards and some insurance carriers, indeed, have assigned definite percentages to various portions of the body, but the problem becomes more difficult if one attempts to determine the per cent of alteration from normal physiologic performance in an individual who has generalized convulsive seizures at approximately monthly intervals following a head injury. Furthermore, does the same per cent of loss of bodily function apply to the individual who has lost the right upper extremity via a traumatic amputation at the shoulder, and to the one who has lost the use of the same extremity because of a complete paralysis secondary to a severe injury of the brachial plexus? When one considers the various possibilities, it becomes obvious that no single, simple table of values can cover all possible situations.

Under such circumstances, the interested authority, whether it be a compensation board, insurance carrier or court, turns to the individual physician for his opinion regarding the per cent of loss of bodily function. If this is a valid method of determining such figures, then we should expect that there will be a reasonable agreement among physicians; however, most experienced lawyers and members of compensation boards will readily attest to the fact that such is not the case.



## Partial Disability Is Hardest to Evaluate

Another attempt to avoid the difficulty inherent in asking the physician for an estimate of "the per cent of disability" involves requesting an estimate of "the per cent of impairment" resulting from an injury. Since it is essentially impossible either to determine all of the functions of a part of the body or to decide what constitutes maximum function, it is impossible to determine the amount of impairment of a particular function, short of total loss. Also the fact that the functions of all parts of the body are interrelated makes it impossible to determine the relative importance of a particular part to the individual as a whole. Therefore, it follows that any percentage figure given to indicate the degree of impairment of an individual as the result of the impairment of a particular part is invalid, even in those cases where the part is totally impaired.

Before leaving the matter of the intrinsic medical factors in disability, I should like to call the reader's attention to one more matter. This concerns the so-called "psycho-genic overlay" in a patient's complaints regarding the results of an injury. How can any physician, even a board-certified psychiatrist, *accurately* assess the role played by this feature in a patient's disability? In this regard, the reader is referred to a report by Gotten<sup>1</sup> in which it was shown that 95 per cent of people with whiplash injuries became asymptomatic following settlement of their litigations.

## Socio-Economic Factors Are Always Involved

Turning now to a consideration of the extrinsic socio-economic factors in disability, it should be obvious to all that the physician is no more expert in this realm than is the average layman. Although the physician is not *usually* asked to render an opinion on these matters, he is influenced by them when rendering an opinion regarding the per cent of disability based, supposedly, on purely medical factors. The physician's knowledge of the patient's occupation or social standing, as well as his own personal biases regarding both the defendant and the plaintiff, will definitely modify his opinion.

Let us first consider the economic factors in disability. If a farmer loses the index finger of his left hand, it can be assumed that his impairment will not seriously hinder him from earning his living running a farm. However, if a concert pianist suffers a similar loss, his career on the concert stage is finished, and he is likely to incur considerable economic hardship. Certainly it will require that he earn his living in a different manner. Economically, one of these men is much more seriously disabled than the other, yet medically their injuries are exactly the same.

Concerning the social factors of disability, consider the individual who develops post-traumatic epilepsy after a head injury. He may curtail much of his former social activity because of the embarrassment caused when his seizures occur in public, or his friends may shun him and exclude him from their gatherings because of their personal prejudice against "people who have fits." Consider the changes brought about in the relationship between a husband and wife following traumatic paraplegia in the man, with its resultant loss of sexual function. These matters are of extreme importance to the injured individual and are, in fact, disabling. However, there is nothing in a doctor's education or background which makes him any more qualified than a non-medical person to judge the degree to which such matters influence the individual's disability.

As a final argument to support the premise that a physician is no more competent to judge disability than is a non-medical person, I should like to cite the report of Kessler and Manning.<sup>2</sup> A series of patients with the residuals of various illnesses were presented to a mixed audience of physicians and lawyers. A ballot was called for, and each person in the audience was asked to indicate his estimate of the patient's disability. When the results of these opinions were tallied, it was found that there was no unanimity of opinion within either group. Furthermore, although there was a difference of opinion between the doctors and the lawyers regarding certain of the cases, the percentage estimates of disability of the two groups almost



exactly paralleled one another except for the shift of a few percentage points.

### Juries Might As Well Be Left to Answer This Question

If it is not the doctor's responsibility to estimate the per cent of disability, then upon whose shoulders does this responsibility fall? I maintain that this is the responsibility of our legislative bodies and our courts, since they have taken it upon themselves to decree that an individual shall receive a monetary award because he has become disabled as the result of an injury. At first glance it might seem that they have accepted this responsibility and are carrying it out effectively, since they do determine the amount of the monetary award. However, if the amount of this award is based upon the percentage of disability suffered by the individual, then, to a greater or lesser degree, the *ultimate responsibility* is shifted to the physician who is asked to give this estimate. Although it is true that many compensation boards have set definite percentage figures for specific anatomic and physiologic losses, there are many situations in which these predetermined figures do not hold, and the onus is placed on the physician to produce the figure. In our courts, there are no predetermined figures, and the per cent of disability is treated as though it were a fact capable of proof like any other. If this is the situation and if we accept the arguments cited earlier in this paper that disability is the result of many factors, socio-economic as well as medical, then the averaged estimates of a jury of twelve persons is statistically more likely to approximate a true average than is the opinion of any one person. It should also be understood that if insurance carriers are going to use per cent of disability in determining the amount of monetary award, then for the reasons outlined above, they must also accept the responsibility for determining the per cent of disability.

I am not suggesting that the physician has no responsibility to the disabled individual. Indeed, he has a very important and essential role which cannot adequately be filled by anyone else. It is his responsibility, in as exact

and clear a manner as he is able, to describe the anatomic and physiologic defects present in any injured individual whom he is asked to see and report upon. If the court or compensation board wishes the doctor to answer specific questions regarding the individual's ability to perform a given type of work or to engage in a particular social activity, he is obliged to answer, provided, of course, that he has sufficient information regarding the anatomic and physiologic requirements of the particular situation under consideration.

### Conclusion

In summary, it has been shown that disability is the result of many factors, economic and social as well as medical. In consequence, the physician is no more capable of estimating a per cent of disability than is a non-medical person. Furthermore, arguments have been presented to support the premise that, although a physician may have an expert's knowledge of anatomy and physiology, he is not able to place a *valid* percentage figure on the contribution normally to be expected of a given anatomic structure or a particular body function. Therefore, it follows that even if disability were directly related to an alteration of a specific part or function, this cannot be used to determine the per cent of disability, since the per cent of function has no constant or real value.

The determination of the per cent of disability is the responsibility of our legislative bodies, compensation boards or any other authorities that assume the right to make financial awards for injuries or illnesses. The physician's duties are only to describe the anatomic and physiologic defects present in an injured individual, and to answer questions regarding the patient's ability to perform specific economic or social functions.

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# Foodborne Infection and Intoxication

Omaha, Nebraska, 1949 - 1964

## Introduction

**P**RESENT knowledge concerning the cause, transmission, and prevention of foodborne disease or infection, commonly referred to as food poisoning, is well known and understood by scientists and leaders in the food industry. Most individuals are well acquainted with basic practices required for safeguarding the purity of their food and drink. Need for refrigeration, heating to adequate temperature, cleansing of hands and dishes, are recognized by all. That foodborne disease is so prevalent is evidence of the inability or unwillingness on the part of some individuals to follow simple food-handling practices routinely.

What is the incidence of such disease?

For the five year period 1951-55, a total of 1066 foodborne outbreaks were reported in the United States and in the next five years, 1956-60, outbreaks numbered 1274. As population continues to increase, and eating out becomes more characteristic of our society, more outbreaks of foodborne diseases involving even greater numbers may be expected. The number reported today represents only a fraction of those which actually occur. Since 1949 the Omaha-Douglas County Health Department has investigated 24 well-defined foodborne outbreaks involving over 4500 people; many ill-defined outbreaks were reported but evidence was too frugal to justify intensive follow-up. Although foodborne disease is reportable by law the Health Department often becomes alerted to an outbreak by circuitous routes and too late either to secure samples or to institute corrective measures. No doubt numerous other outbreaks have occurred but remain unknown to the department. Indeed, it is a rare person who is not afflicted by a foodborne gastrointestinal disturbance in the course of a year. One could surmise that the

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true incidence of foodborne disease involves millions of people every year with loss in terms of absenteeism and productivity beyond estimate.

## Purpose

The purpose of this paper is to review the magnitude of foodborne disease occurring locally, to evaluate programs devised for coping with the problem, and to suggest further means designed to safeguard the public health.

## Nature of Foodborne Diseases

To insure a safe and wholesome food supply, food products must be guarded in all stages of handling from farm to consumer. Environmental conditions must be such that deleterious chemicals (additives), bacteria, and toxins, can in no way contaminate the food. Although it is not the purpose of this paper to delve into the many chemicals and toxins that could conceivably contaminate our food supply some review of the ecology of the most common epidemic foodborne outbreaks occurring in Omaha-Douglas County may prove helpful.

Food infection results from ingestion of food containing pathogenic bacteria, such as salmonellae, streptococci, or other disease-producing microorganisms. Food intoxication is caused by the ingestion of foods in which certain organisms, such as staphylococci or *Clostridium botulinum* have previously grown and elaborated toxin.



### Type Examples

*Salmonellae*: The numbers of salmonellae organisms that may cause food poisoning in man are legion and can be differentiated by cultural and serological tests. Salmonellae organisms are primarily intestinal parasites widely distributed in man, mammals, and birds. The salmonellae do not elaborate an exotoxin as do the staphylococci but produce an endotoxin. When living organisms of the food-poisoning type are ingested, acute gastroenteritis and fever may develop in 12 to 24 hours. Once infected, individuals may remain intestinal carriers and possible sources of infection for many months. Deaths have been known to occur, particularly in the very young and debilitated of all ages. Septicemia and chronic conditions such as osteomyelitis may develop. Control measures recommended usually include sanitation, refrigeration, and the application of heat to kill the organism.

*Staphylococci*: These organisms are extremely widespread in air, water, milk, and sewage, but their main source is the animal body, specifically the skin, the intestinal, and respiratory tracts. During their growth in suitable food media (at least four hours at temperature of 50° to 120° F.), certain strains of staphylococci elaborate a heat stable filterable substance, enterotoxin, which gives rise to acute intestinal disturbance within one to four hours of ingestion. The appearance or flavor of the food may not be noticeably altered. Control measures are mainly focused on keeping foods below or above incubation temperatures.

### Review of Investigations

Whenever a sizeable number of cases of gastroenteritis is reported to the Health Department several questions are raised by the epidemiologist:

1. What was the source and by whom was the infection contracted?
2. What was the route by which infection was spread to known victim(s)?
3. To what other persons may the infection have been spread from the same source?

4. To whom may the present case(s) have already transmitted the infection?
5. What suitable precautions should be taken?
6. What can be learned from this case(s)?

If the answers to the first of these questions appear to implicate food, then the sanitarian investigates:

1. Possible contamination source;
2. Refrigeration temperatures;
3. Food handling practices, such as methods of cleaning vegetables;
4. Methods used in sanitizing of cooking utensils;
5. Cooking methods;
6. Time elements; the time between preparation and consumption.

### Results of Investigations

Since 1949, 23 foodborne outbreaks have been intensively investigated (Tables 1 and 2). In these epidemics over 4500 people were exposed and 2455 known to be ill. In nine epidemics the etiology was confirmed by the laboratory (Table 3). *Staphylococcus* toxin was incriminated in four epidemics, salmonellae in three, and *Proteus mirabilis* and nicotinic acid in one each. Although 13 epidemics were not etiologically confirmed by laboratory techniques (in many cases reporting was late or specimens unavailable), the epidemiologic characteristics were compatible with salmonellae in eight outbreaks, *Clostridium perfringens* in one, and two outbreaks suggested double infection with salmonellae and staphylococci. No etiological diagnosis could be ascertained in two outbreaks. Foods inadequately preserved during handling and preparation prior to immediate consumption were the usual findings. Some foods, from their very nature are more likely to serve as vehicles of food poisoning than others. Meat was suspected in seven outbreaks, cream pies in three, gravy in two, and lettuce salad in one. In 11 outbreaks no one specific food item could be epidemiologically associated.

Improper food preparation was incriminated in essentially all outbreaks. Defective



Table 1  
FOODBORNE OUTBREAKS INTENSIVELY INVESTIGATED  
OMAHA-DOUGLAS COUNTY, 1949-64

| Date Reported   | Specimen Submitted | Population at Risk | Number Ill | Presumptive Diagnosis            | Laboratory Confirmed | Food Suspected           |
|-----------------|--------------------|--------------------|------------|----------------------------------|----------------------|--------------------------|
| 8-13-49         | No                 | 4                  | 4          | Staphylococcus                   | No                   | Coconut Cream Pie        |
| 2-11-50         | Yes                | 4                  | 4          | Salmonella                       | Yes                  | Ham                      |
| 11-11-50        | Yes                | 50*                | 400**      | Staphylococcus                   | Yes                  | Boston Cream Pie         |
| 12-12-51        | Yes                | 46                 | 42         | Salmonella                       | Yes                  | Chicken & Noodles        |
| 3-11-53         | No                 | 640                | 91         | Salmonella                       | No                   | ?                        |
| 2-13-56         | Yes                | 145                | 88         | Nicotinic acid                   | Yes                  | Meat                     |
| 11-11-56        | No                 | 50                 | 43         | Salmonella                       | No                   | ?                        |
| 12-30-56        | No                 | 19                 | 9          | Salmonella                       | No                   | ?                        |
| 6-20-57         | Yes                | 300                | 112        | Proteus mirabilis                | Yes                  | Meat                     |
| 7-24-57         | Yes                | 203                | 135        | Salmonella javana                | Yes                  | ?                        |
| 10-20-57        | No                 | 1400               | 584        | Salmonella                       | No                   | Meat or gravy ?          |
| 11-16-57        | No                 | 60                 | 28         | Salmonella                       | No                   | ?                        |
| 11- 9-57        | No                 | ?                  | 7          | ?                                | No                   | ?                        |
| 2-23-58         | No                 | 8                  | 6          | ?                                | No                   | ?                        |
| 5-13-58         | No                 | 10                 | 7          | Staphylococcus and/or Salmonella | No                   | Roast Duck Dressing ?    |
| 7-19-58         | Yes                | 60                 | 60         | Staphylococcus                   | Yes                  | Coconut Cream Pie        |
| 1-27-60         | Partial            | 82                 | 55         | Salmonella                       | No                   | ?                        |
| 6-10-60         | No                 | 30                 | 20         | Salmonella                       | No                   | Lettuce Salad ?          |
| 10-22-60        | Yes                | 300                | 152        | Staphylococcus                   | Yes                  | Turkey                   |
| 11-23-60        | No                 | 200                | 65         | Staphylococcus & Salmonella      | No                   | ?                        |
| 9-22-62         | Yes                | 100                | 36         | Salmonella                       | No                   | ?                        |
| 12- 5-62        | Yes                | ?                  | 4          | Staphylococcus                   | Yes                  | Ham                      |
| 3- 6-64         | No                 | 600                | 408        | Clostridium perfringes ?         | No                   | Gravy & Whipped Potatoes |
| Total 1949 - 64 |                    | 4519               | 2455       |                                  |                      |                          |

\*—Over 50  
\*\*—Est. 400

Table 2  
SUMMARY FOOD POISONING  
OMAHA-DOUGLAS COUNTY, 1949-64

| Total no. Outbreaks Reported | Specimen Obtained |          | Laboratory Confirmation |          | Per Cent of Total Confirmed |
|------------------------------|-------------------|----------|-------------------------|----------|-----------------------------|
|                              | Number            | Per Cent | Number                  | Per Cent |                             |
| 24* -----                    | 12                | 50       | 9                       | 75       | 38%                         |

\*—Includes one outbreak not intensively investigated.  
Source: Omaha-Douglas County Health Department records.

Table 3  
LABORATORY ISOLATIONS—FOOD  
POISONING  
OMAHA-DOUGLAS COUNTY, 1949-64

| Laboratory Diagnosis    | Number of Isolations |
|-------------------------|----------------------|
| Staphylococcus -----    | 4                    |
| Salmonella -----        | 3                    |
| Proteus mirabilis ----- | 1                    |
| Nicotinic Acid* -----   | 1                    |
| Total -----             | 9                    |

\*—Neb. State Med. J. p. 243 (1957)  
Source: Omaha-Douglas County Health Department records.

equipment was definitely confirmed in at least three epidemics. Pre-prepared meals involved at least eight epidemics, and, in four, the food-handling operation was responsible in large groups of individuals such as camps and university dormitories. In one instance the food processor was responsible for a widespread outbreak of nicotinic acid poisoning caused by addition of the chemical for the purpose of preserving the bright coloration of fresh meat. A catering establishment, responsible for supplying sandwiches to a large vending machine company was re-

sponsible for a widely diffused epidemic, causing a very serious illness requiring hospitalization.

The distribution of precooked foods and ready-to-serve food products through commercial channels, although a convenience to the consumer, has introduced additional problems in the control and prevention of food poisoning. A single food-handler today may be responsible for the health and welfare of literally thousands of people.

In one epidemic involving several hundred college students, the names and addresses of 44 food handlers were secured and home visits were made. The findings were disquieting. Sanitarians were unable to make contact with 21 food handlers for a variety of reasons as no one at home, wrong or non-existent addresses, and moved. Transiency was characteristic of this group. Of the twenty homes that were inspected, nine failed to meet minimum housing standards as prescribed by the local minimum dwelling standards ordinance, title 53.

### Present Program

Table 4 outlines the various codes relating to sanitation of food and drink enforced by the Health Department.

The problems of enforcement are numer-

ous and will not be discussed here except to say that many forces are operating beyond either the control of the operator or the enforcement agency. For example, industry is ever changing, due to scientific knowledge, manufacturing processes, economics, and living patterns, all of which bear upon enforcement. Those charged with enforcement must at all times attempt to be objective, fair, and cooperative, yet steadfast in insisting upon maintenance of sound public health practices.

The present Omaha Municipal Code governing public eating and drinking establishments became law in 1947, and enforcement was begun in that year. Although handicapped by a limited membership the Omaha Restaurant Association over the years has worked very closely with the Health Department and considerable gains have been made in upgrading the level of the entire industry.

One of the most effective enforcement measures developed was the rating of eating establishments based on five items considered of prime importance: (1) housekeeping, (2) dishwashing, (3) refrigeration, (4) construction of equipment, and (5) food-handling. Five ratings grades were given in descending order: Excellent, Excellent-

Table 4  
SANITATION CODES ENFORCED BY THE OMAHA-  
DOUGLAS COUNTY HEALTH DEPARTMENT

| Nature of Code                                                                                    | Year Enacted | Remarks                                                                          |
|---------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------|
| Retail Food Stores<br>(Groceries and Meat Markets)                                                | 1961         | No sanitary regulations for these establishments existed prior to this code.     |
| Meat Packing                                                                                      | 1954         | Practically a new code.                                                          |
| Frozen Dessert*<br>(Ice Cream, Mix, Sherbet)                                                      | 1949         | No sanitary regulations existed in this area prior to this code.                 |
| Food and Drink Establishment*<br>(Restaurants, Cafes, Bars, Hotels, Hospitals, Schools, Caterers) | 1947         | First code to be passed following reorganization of the Health Department.       |
| Milk*                                                                                             | 1943         | First model code of USPHS to have been adopted by Omaha.                         |
|                                                                                                   | 1951         | Updated to permit sale only Grade A pasteurized milk.                            |
| Bakery and Food Manufacturing                                                                     | ?            | Requires extensive revision.                                                     |
|                                                                                                   | 1959         | Responsibility for enforcement transferred to Health Department by City Council. |

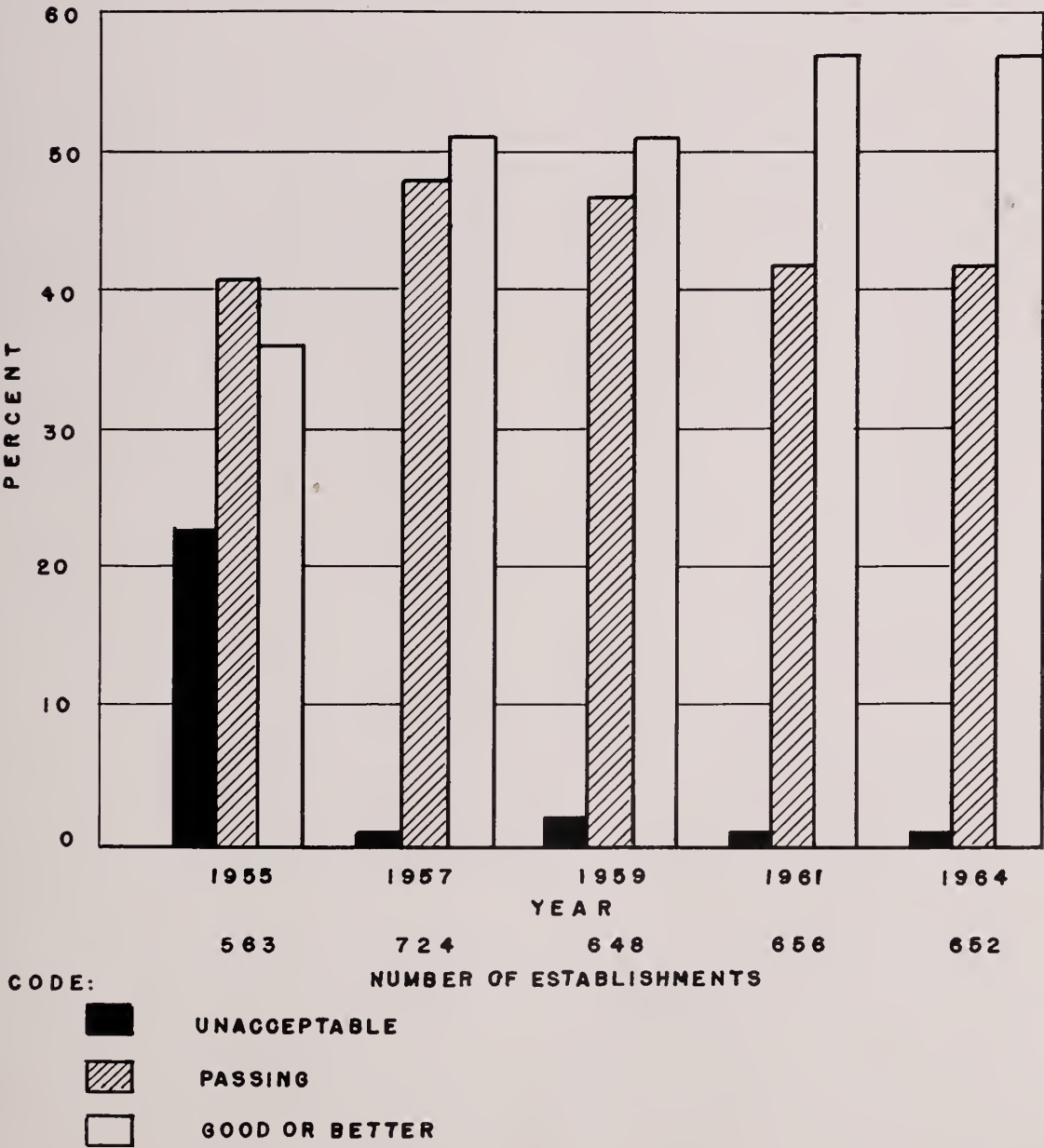
\*—Based on model code of U.S. Public Health Service.

Good, Good - Fair, and Fair. An establishment rating good or better obviously was doing more than just barely meeting the minimum requirements established by law. Those rating Good - Fair could be considered borderline and those rating Fair are not meeting standards.

In 1955, a listing was prepared of all eating establishments according to the rat-

ing given at time of last inspection. Figure 1 reveals how ratings have shifted since issuance of the first listing in 1955. A precipitate drop occurred in establishments failing to meet standards. This "drop" was effected by the establishments themselves, who were prompted to action. Publication of the rating list worked to upgrade these establishments to their economic betterment. In 1955, only 36 per cent of establishments

Figure 1  
DISTRIBUTION OF SANITATION RATINGS  
PUBLIC EATING ESTABLISHMENTS, OMAHA, NEBRASKA





rated good or better. Only four or 0.7 per cent rated excellent. In 1964, 57 per cent rated good or better and 43 or 6.6 per cent excellent — a tenfold rise in nine years. Public demand has resulted in distribution of over 30,000 copies yearly.

Similar progress has been made in upgrading retail food stores including groceries and meat markets. Programs relating to water and milk sanitation are far in advance of the solid food industry.

### Discussion and Recommendations

There is convincing evidence in the literature today that progress in foodborne disease control is probably not keeping pace with progress in other fields of public health. We have witnessed the remarkable decline and eradication of water- and milk-borne diseases such as typhoid fever\* and tuberculosis with the advent of microbiological control, brought about by chlorination and filtration of water supplies, by testing for bovine tuberculosis and brucellosis, and by pasteurization of milk and milk products.

Why has control of foodborne disease lagged behind water and milk sanitation control programs? Some of the reasons may be listed as follows:

1. Pathogenic organisms are ubiquitous and processing of solid foods, unlike liquids, does not lend itself well to terminal sterilization.
2. Handling by many food handlers vitiates any sound program of germicidal treatment prior to ingestion.
3. No absolute standards of bacterial quality for solid foods exist such as are employed in sanitary water and milk control programs.
4. People as a whole, including practicing physicians, are unaware that food poisoning and infections are preventable diseases. Many outbreaks go unreported providing no opportunity to institute preventive measures. Such unawareness and apathy neither

stimulate appraisal of existing control programs nor encourage formulation of new ones.

5. Although there has been sanitary inspection of food handling establishments, there has been no objective routine microbiological appraisal of operations, including laboratory tests on the conditions of the food, food handling equipment, and the food handler.

Much has been done to cope with foodborne infection and intoxication under the present ordinances which have set minimum standards and provided guidelines for proper food handling but much remains to be accomplished.

Enforcement of any sanitary code must follow two main courses: (1) education, and (2) police or court action. In the long run, education offers the only feasible approach since good food-handling techniques must become habitual on the part of the food handler. The educational approach places the sanitarian more in the light of an adviser or expert who has valuable knowledge he can impart to members of the industry.

Continued outbreaks of food poisoning testify to the failure of applying known public health principles. Apparent small derelictions on the part of one food handler may affect the health and welfare of large groups of people. Food handlers cannot be expected to practice principles to which they have never been exposed. Application of accepted food handling procedures demands understanding and conviction on the part of each individual.

Several major deficiencies exist in the total program designed to protect the consuming public. No sanitary ordinances exist governing wholesale food stores and food vending machines. Present ordinances relating to bakeries and food manufacturing plants are antiquated and require considerable overhauling or preferably replacement.

Perhaps the greatest deficiency, however, lies in the fact that there is no registration or licensure of food handlers. Registration of food handlers should be based upon satisfactory completion of an educational course

\*The recent typhoid outbreak in Scotland and Switzerland points out the need for constant upgrading of standards provided to safeguard the public health in the fields of water, milk, and solid food sanitation.

in sanitary food handling and meeting specified standards of personal health.

### Summary

1. Twenty-three intensively investigated outbreaks of foodborne infection and intoxication from 1949 to present are reviewed.
2. Present programs of prevention are outlined. Major deficiencies endangering the safety of the public are enumerated.
3. Prevention of foodborne infection and intoxication are dependent upon the time-honored principles of sanitation, refrigeration, and cooking, all of which require the understanding and application of the food handler.
4. Registration of food handlers is recommended being based upon satisfactory completion of a course in sanitary food handling and meeting of specified standards of personal health.

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### GENETICS AND THE PRACTICE OF MEDICINE

Genetics has come to assume the dimensions and proportions of an additional basic science within the wider discipline of modern medicine. Advances in this field have been truly phenomenal and have brought with them the necessity for the physician to learn a new language and to acquire a new way of thinking . . . (From a book review of Widukind Lenz, "Medical Genetics." Arch Int Med, March 1965, p. 627).

# Free Amino Acids In Human Female Reproductive Tissues\*

THE mechanism by which sex steroids exert their specific growth-inducing effects on target organs is still incompletely understood despite a great variety of ingenious experimentation. Since growth is dependent on protein biosynthesis, it is this central process that has come to be regarded as the one primarily susceptible to hormonal influences. Existing evidence indicates that sex hormones may stimulate protein formation in reproductive tissue by two means: (1) The hormones may act on a nucleic acid fraction that controls protein synthesis, or (2) they may increase the availability of amino acids that are the raw materials for making proteins. The first hypothesis has received strong support in recent reviews.<sup>1,2</sup> The second possibility derives from the work of Christensen who showed that hormones enhance the entry of amino acids into cells.<sup>3</sup> High levels of free amino acids are known to be associated with rapid growth in fetal, regenerating, and malignant tissues.<sup>4-6</sup>

As a preliminary phase in a study of sex steroid influences on amino acid transport, protein synthesis, and growth, free amino acid levels in human female reproductive tissues were studied to provide normal base values for later investigations. In addition, the action of estradiol and progesterone on free amino acids in rat uterus was determined to indicate the magnitude and direction of change for each individual amino acid as a guide to further work on human tissues. Kalman<sup>7</sup> previously reported on amino acid changes in rat uterus after estradiol treatment but the injected dose was small (2 ug) and the time interval for response was limited to 24 hours. Since the effects of continued exposure to a steroid may differ from acute single exposure or dose, the experimental period in the present study was extended to approximately one week. Secondly, massive doses of hormone were used to see if the organ response was maximal, and

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finally, progesterone was employed in some experiments to determine if a synergistic action was exerted.

## Methods

Young female rats, Holtzman strain, of about 90-110 grams were ovariectomized. Eight days after surgery, 50 ug. estradiol suspension (Aquadiol, National Drug Co.) was injected intraperitoneally. The injection was repeated on day 10 and 12. In the estrogen-progesterone treated group, the third dose of estradiol additionally included 1 mg. progesterone (Ayerst Laboratories). The experimental and the ovariectomized control were sacrificed approximately 48 hours after the last injection. The removed uteri were frozen on dry ice, pooled, weighed, disintegrated in picric acid to remove protein, and the amino acids were determined on a Spinco Amino Acid Analyzer, Model 120-B, according to the procedure of Spackman *et al.*<sup>8</sup> Basic amino acids were assayed by the accelerated method of Kirkpatrick.<sup>9</sup> Groups of 8 or 10 rats were necessary to provide sufficient tissue for analysis.

Human tissue samples obtained at the time of surgery were frozen immediately after excision and prepared for analysis in the same manner as above. Pertinent clinical facts relative to the seven cases studied are:

*Patient No. 1* — 46 yrs. old, white, gravida

\*This research was supported by USPHS Grant HD-01180-03 and a grant from the Nebraska Division of the American Cancer Society. Presented before the Nebraska State Obstetric and Gynecology Society, December 4, 1964, at Las Vegas, Nevada.



1, para 1, with menorrhagia; subsequent to radical mastectomy underwent complete hysterectomy with bilateral salpingoophorectomy. No organic lesions in the surgical specimen.

*Patient No. 2* — 37 yrs. old, white, gravida 6, para 1, ab. 5, with severe menometrorrhagia; found to have a large submucous leiomyoma.

*Patient No. 3* — 47 yrs. old, white, gravida 4, para 4, with postmenopausal bleeding from adenomatous hyperplasia of the endometrium and cystocele and rectocele. Vaginal hysterectomy with anterior posterior colporrhaphy was done.

*Patient No. 4* — 43 yrs. old, white, gravida 1, para 1, with severe menorrhagia. Multiple uterine leiomyomata were found at surgery with the uterine size about that of a 6 month gestation.

*Patient No. 5* — 50 yrs. old, gravida 14, para 11, with menorrhagia. A large uterine leiomyoma and adenomyosis of the uterus was found at surgery.

*Patient No. 6* — 42 yrs. old white, gravida 6, para 6, with menometrorrhagia. At surgery recurrent myometrial hyperplasia and chronic salpingitis was found.

*Patient No. 7* — 44 yrs. old, Indian, gravida 6, para 4, with metrorrhagia, diabetes mellitus, pericarditis, and cirrhosis of the liver and umbilical hernia was found to have intramural leiomyomata with a large pedunculated subserosal leiomyoma.

### *Results and Discussion*

Table 1 shows the mean for free amino acids in human female reproductive tissues. It is apparent that uterine myometrium tends to be richer in most amino acids than are other tissues. The cervix in contrast to the uterine corpus is uniformly lower in all amino acids and ninhydrin-positive compounds except ammonia. Ovarian tissue is also richer in ammonia than is the uterine myometrium but not as high as is the cervix.

Of considerable interest is the fact that glycerophosphoethanolamine and phosphoethanolamine are higher in ovarian tissue than in the uterus. These substances are

phospholipid components and this finding suggests that ovary possesses a more active lipid metabolism than do other female reproductive structures. The taurine level is observed to be strikingly higher in ovary compared to uterus and cervix. This amino compound is a product of sulfur amino acid catabolism. Its significance in body tissues is unknown. Arginine is likewise elevated in ovary.

Aspartic acid is slightly higher (about three per cent) in ovary than it is in uterus. This small difference is believed to be significant since in five of six patients the ovary contained more aspartic acid than did the corresponding uterus from the same patient. An explanation of this finding is not at hand.

The means for amino acids in four uterine tumors are listed in table 1. No overall generalization emerges from the data. Some amino acids are higher and others are lower than obtain for normal uterine tissues. The absence of any characteristic or consistent pattern is noted on comparisons between the benign uterine tumors. In some cases, the tumors contained more of a certain amino acid than did the comparable uterus, and in other instances the same amino acid was found to be less in the tumor than in the uterus. It appears that a larger series of such tumor samples must be run to determine if differences exist between tumors and normal uterine myometrium.

Sufficient endometrium was obtained from patients 1 and 3 to permit separate amino acid assay. The mean values either as compared to the seven pooled uterine samples in Table 1 or compared to the two corresponding uteri (not shown) reveal an interesting difference. Endometrium tends to be higher in free amino acids than is uterine myometrium except for aspartic and glutamic acids. These amino acids can be readily synthesized by transaminase enzymes from Krebs tricarboxylic acid cycle intermediates. The relative dearth of these amino acids suggests that Krebs cycle metabolites might not be abundant in endometrium and that the activity of this pathway is minimal. This is in accord with recent histochemical find-

Table 1  
FREE AMINO ACIDS OF FEMALE REPRODUCTIVE  
ORGANS  
(Micromoles/GM Wet Weight)

| TISSUE<br>No. Samples                 | Uterus<br>(7) | Cervix<br>(7) | Ovary<br>(6) | Tumor<br>(4) | Endo-<br>metrium<br>(2) |
|---------------------------------------|---------------|---------------|--------------|--------------|-------------------------|
| Glycerophos-<br>phoethanolamine ----- | .14           | .07           | .19          | .09          | .22                     |
| Phosphoethanolamine --                | 2.42          | 1.71          | 3.81         | 1.93         | 2.63                    |
| Taurine -----                         | 3.40          | 2.17          | 5.76         | 2.52         | 5.63                    |
| Aspartic Acid -----                   | .67           | .34           | .69          | .39          | .36                     |
| Threonine -----                       | .29           | .18           | .15          | .37          | .30                     |
| Serine -----                          | .22           | .16           | .18          | .26          | .29                     |
| Glutamine-Asparagine -                | 1.51          | .80           | .79          | 1.56         | 1.13                    |
| Proline -----                         | .23           | .15           | .18          | .31          | .27                     |
| Glutamic Acid -----                   | 3.45          | 1.50          | 1.67         | 2.43         | 2.40                    |
| Glycine -----                         | 1.06          | .75           | .90          | .85          | 1.18                    |
| Alanine -----                         | .56           | .47           | .51          | .78          | 1.08                    |
| Valine -----                          | .19           | .17           | .19          | .20          | .29                     |
| Methionine -----                      | .03           | .03           | .03          | .05          | .05                     |
| Isoleucine -----                      | .06           | .06           | .06          | .08          | .10                     |
| Leucine -----                         | .13           | .12           | .14          | .17          | .25                     |
| Tyrosine -----                        | .06           | .05           | .06          | .09          | .08                     |
| Phenylalanine -----                   | .05           | .04           | .05          | .07          | .10                     |
| Ammonia -----                         | .79           | 1.23          | 1.03         | .83          | --                      |
| Lysine -----                          | .20           | .17           | .28          | .18          | .33                     |
| Histidine -----                       | .09           | .06           | .07          | .10          | .09                     |
| Arginine -----                        | .09           | .07           | .12          | .11          | --                      |

ings that indicate the virtual absence of key Krebs cycle and cytochrome enzymes in endometrial samples.<sup>10</sup>

The above results represent the first comprehensive observations on free amino acid content of human female reproductive tissues. It is recognized that by pooling data from separate patients to economize on space in presentation, individual comparisons are lost in the averaging process. However, the differences between uterus, cervix, and ovary for each patient that were consistent for all patients were not obscured by using the mean value. It seems established that female reproductive tissues show organ-characteristic differences in free amino acid levels. The metabolic significance of these differences remains to be probed.

Data from a typical experiment is presented in Table 2 showing the influence of estrogen and estrogen-progesterone on free amino acid levels in rat uterus. A quite general increase of amino acid levels follows hormone treatment, as anticipated from the work of Kalman.<sup>7</sup> The concentration increases were not as large, however, as those reported in the earlier work despite the fact

that repeated injections of estrogen in larger quantities (50 micrograms) was involved in the present investigation. Failure to exceed the increases of Kalman suggests that the uterine amino acid uptake mechanism is

Table 2  
INFLUENCE OF SEX STEROIDS ON FREE  
AMINO ACIDS IN RAT UTERUS

|                            | Ovariectomized<br>Controls | Estrogen<br>Treated | Estrogen-<br>Progesterone<br>Treated |
|----------------------------|----------------------------|---------------------|--------------------------------------|
| Taurine -----              | 8.01                       | 6.14                | 8.65                                 |
| Aspartic Acid -            | .80                        | 1.18                | 1.14                                 |
| Threonine -----            | .37                        | .56                 | .51                                  |
| Serine -----               | .59                        | .78                 | .84                                  |
| Glutamine-<br>Asparagine - | 1.67                       | 2.56                | 2.57                                 |
| Proline -----              | .18                        | .37                 | .21                                  |
| Glutamic Acid -            | 3.63                       | 3.81                | 4.61                                 |
| Glycine -----              | 2.00                       | 2.43                | 2.53                                 |
| Alanine -----              | 1.07                       | 1.93                | 1.63                                 |
| Valine -----               | .19                        | .26                 | .27                                  |
| Methionine ---             | .03                        | .09                 | .08                                  |
| Isoleucine -----           | .09                        | .14                 | .13                                  |
| Leucine -----              | .16                        | .25                 | .29                                  |
| Tyrosine -----             | .08                        | .13                 | .10                                  |
| Phenylalanine--            | .03                        | .10                 | .09                                  |
| Lysine -----               | .33                        | .35                 | .37                                  |
| Histidine -----            | .08                        | .09                 | .09                                  |
| Arginine -----             | .18                        | .23                 | .13                                  |

(Free amino acid values expressed in micromoles per gram wet weight).

already showing maximal response at the 2-microgram dose level. The decline in taurine after estradiol injection first observed by Kalman was confirmed in this study. It may be further noted that progesterone did not exert a major synergistic effect on amino acid uptake compared to what estrogen induced alone. The fact that younger rats of a different strain were used in the present research does not appear to be responsible for the lesser response found with estrogen.

The methodology employed allowed for better separations and more accurate determinations of individual amino acids than does the technique used by Kalman. Nevertheless, no significant deviation from the pattern previously reported occurred in this study. Plasma amino acids were also run. Variation with estrogen or estrogen-progesterone treatment was minor and not consistent in different experiments.

The results with rat uteri clearly confirm that sex steroids can influence free amino acids in reproductive tissues. Studies in this area have been largely confined to uterus. The finding with human tissues that different organs may possess characteristic free amino acid patterns raises the question of how these patterns may change on administration of sex steroids. Since different organs have varied functions and metabolic activities, it is implied that reproductive tissues would show both profound and distinct amino acid responses to hormone treatment. The preliminary documentation on amino acid levels in human tissues in this report provides the base values for future exploration of this neglected subject.

### Summary

Free amino acids and ninhydrin-positive substances in uterus, cervix and ovary from seven patients were determined by an automatic amino acid analyzer. Uterine myo-

metrium evidenced higher levels of amino acids except that ovary was richer in taurine, glycerophosphoethanolamine, phosphoethanolamine, aspartic acid, and ammonia, while uterine cervix had the highest concentration of ammonia. Four uterine tumors and two endometrial samples were also assayed. The possible significance of some of the observed differences is discussed.

Multiple injections of 50 micrograms of estradiol into ovariectomized rats was found to elevate uterine free amino acids. Progesterone (1 milligram) did not exert a major synergistic effect on this estradiol action.

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"... When they opened up the royal tombs at Ur in Babylonia, they found lipstick among the goodies buried with female departees — and that was 4000 years ago . . ." (Paul Malloy in *Chicago Sun-Times*).



# Halothane

and the

## Liver

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IT has been suggested that halothane anesthesia may be followed by liver damage, and that this complication may be fatal. The opinion is based on theoretical reasons, relating to the hepatotoxicity of halogenated hydrocarbon compounds, and on statistical grounds. Theoretical considerations are far too important to be lightly disregarded; and a proper statistical study is obviously necessary before a conclusion can be reached. It must be pointed out with the utmost firmness that giving 500 cases and forming a liking for the drug gives one no information regarding its hepatotoxicity and does not qualify one to speak with any authority on the subject. The administrator of a few hundred cases is too apt to refuse to believe that a "good" drug can be dangerous. If he has come to like the agent, and to depend on it, he may find himself equating nonflammability with nonhepatotoxicity; there is no connection between the advantages claimed for halothane anesthesia and its effect on the liver.

What must be determined is the incidence of injury to the liver in a respectably large series of cases, and its mortality rate. The administrator of anesthesia is in no position to do this, and should refrain from any attempt to do this; the statistician is unable to make any of the observations himself, but it is to him, and to him alone, that we must turn for an answer. Chloroform was once one of our most popular and powerful anesthetic agents. It too was a halogenated hydrocarbon, it too was nonflammable; it was shown to be hepatotoxic, and fell quickly into disuse. Is the story of halothane that of chloroform? Let us see what has been reported.

This may be the first reported case of jaundice and death following halothane anes-

thesia.<sup>1</sup> The patient was a 56 year old man with malignant ulcer of the tongue; the operation, dental extraction and biopsy. "At necropsy the liver was very pale and the surface was haemorrhagic. On cutting across it was flabby but not obviously necrotic to the naked eye. The biliary system was normal. Histological examination showed: 'A diffuse infiltration of the portal tracts by anaplastic neoplastic cells. There is widespread fatty degeneration of the liver cells and many of the cells are necrotic'."

Burnap, Galla, and Vandam presented two cases in 1958.<sup>2</sup> In one, anuria and hepatic failure appeared postoperatively, and the patient died. "Microscopic examination of the liver revealed marked central lobular necrosis consistent with severe chronic passive congestion. The area of damage was the same as seen with carbon tetrachloride or chloroform poisoning." The second patient was reoperated because of a right upper abdominal mass; the mass was an enlarged rubbery liver, and a pathological diagnosis of postnecrotic cirrhosis was made. "Halogenated hydrocarbons," the authors state, "have always borne this reputation of hepatotoxicity."

Virtue and Payne reported a case of cholecystectomy and cholangiography;<sup>3</sup> the patient, a 39 year old female, developed postoperative fever, became lethargic, and died. "Death was believed due to acute yellow atrophy of the liver and acute pancreatitis."

Jones, Margolis, and Stephen<sup>4</sup> studied the effects of esophageal instillation of anesthetic drugs in white mice. "Fluothane," they said, "produced liver cell injury which was manifested as a fatty infiltration without necrosis."

"Halothane," said Dr. Barton in 1959,<sup>5</sup> "has proved very useful, but I have been somewhat disturbed by 2 cases of jaundice appearing within 48 hours of its administration." It was not the first case of post-halothane jaundice, but he may have been the first to want to know "whether any other patients have become jaundiced after having halothane."

"Dr. Barton's observations," wrote Dr. Dobkin<sup>6</sup> a month later, "cannot be passed by lightly."

Vourc'h, Schnoebelen, Buck, and Fruhling now reported<sup>7</sup> a case in which a 35 year old man, athletic and in good health, underwent inguinal hernioplasty and plastic repair of an old appendectomy scar under halothane anesthesia. Waking was very slow; and jaundice, oliguria, fever, tachycardia, profuse vomiting, and abdominal distention appeared. The patient died on the fourth day after the operation. Acute degenerative hepatitis and total necrosis of the renal parenchyma were found at autopsy. The authors felt that halothane seemed directly responsible for the hepatonephritis, pointing out the facts that there was no history of alcoholism or of residence in tropical countries, and that the operation did not involve the biliary system. They were of the opinion that the possibility of coincidence is remote, that no other anesthetic used could have been responsible, and that the fatal complication could not be explained by anoxia or hypotension. The most satisfactory explanation, they felt, is that of hepatonephritis, probably due to halothane.

Bamforth, Siebecker, Steinhaus, and Orth reported, in 1960,<sup>8</sup> as follows. "The effect of halothane on liver function is of interest. Many authors have reported that hepatic function is not altered significantly by this drug. However, reports of pathological damage to the liver have begun to appear in the literature. The evidence suggests that liver damage is at least possible after administration of halothane, although the hazard is probably less in improperly managed cases than with chloroform. It is possible that further reports of such damage will occur." They further concluded that "halo-

thane bears a strong clinical resemblance to chloroform."

"The hepatotoxic potentiality of halogenated hydrocarbon compounds," wrote Sadove and Wallace in 1962,<sup>9</sup> "has been accepted for many years. The range of toxicity in this group of compounds has been found to be quite broad, and, to a certain degree, can be related to the molecular structure of the individual compounds. In general, the inclusion of chlorine and bromine atoms tends to increase the hepatotoxic properties of a compound." Five of the six hydrogen atoms in ethane are replaced by halogens in halothane; the formula for halothane is  $C_2HBrClF_3$ .

Temple, Cote, and Gorens reported a case of fatal massive hepatic necrosis following the administration of halothane, in 1962.<sup>10</sup> The patient was a 44 year old white male who received two halothane anesthetics, for skin graft and for thyroidectomy. "Halogenated hydrocarbons," they stated, "have been known to produce massive hepatic necrosis, followed by necrosis of the kidney;" the kidneys shared in the pathological process.

Brody and Sweet now presented four cases, three of which were fatal, which, they wrote, "implicated halothane as the causative agent in massive hepatic necrosis (acute yellow atrophy.)"<sup>11</sup>

Now Vandam,<sup>12</sup> in an editorial appearing in the same issue as the report by Brody and Sweet, wrote: "Hepatic studies in man were performed only on several small groups of patients under optimal circumstances and histological studies were not performed." He continued: "Now we learn of four cases of hepatic necrosis. Brody and Sweet refer to four other instances and there is still another case described by Temple and his co-workers." In his conclusions he said, "Immediate investigation is called for in as many clinics as possible for we cannot afford to wait as long as our forbearers did to discover the facts about chloroform."

In March, 1963, Lindenbaum and Leifer<sup>13</sup> reported nine cases in which postoperative hepatic necrosis followed the use of halo-



thane anesthesia, with one death. "Evidence for other causes of hepatic necrosis in these cases," they stated, "was unimpressive."

Bunker and Blumenfeld<sup>14</sup> describe two cases of liver necrosis following halothane anesthesia in the very journal containing the report by Lindenbaum and Leifer; both patients died. "There is a striking similarity," they wrote, "between the fatal outcome in the 2 cases presented above and liver death after chloroform anesthesia. The clinical picture of hepatic failure developing a week or less after anesthesia and the pathological picture of central necrosis of the liver are precisely those that in a bygone era became recognized as a major hazard of chloroform. The appearance of this pattern in a patient who has received a new halogenated anesthetic strongly suggests that the anesthetic may be responsible."

Once more the cases of liver damage and death were collected and reviewed in an editorial<sup>15</sup> in which it was said: "It is disquieting to learn, after several million halothane anesthetics have been given with increasing safety and satisfaction, that the finger of suspicion begins to point toward development of hepatic damage of the delayed chloroform-poisoning type." The review cites the eleven cases reported by Lindenbaum and Leifer and by Bunker and Blumenfeld, and goes on to say: "Coupled with the earlier cases cited in the references and another recent report of 4 cases, the association between halothane and liver injury is projected beyond the realm of mere coincidence. At least 10 deaths are now known to have occurred. Heretofore, hepatic necrosis has been almost unheard of as a complication of anesthesia, or surgical operation for that matter, except when chloroform was used." The article called for liver function tests in a large number of patients, and concluded, "If suspicions are confirmed, hepatic necrosis may be considered too large a price to pay for the avoidance of anesthetic explosions that are controllable by other means."

Tornetta and Tamaki at this point added two more cases of post-halothane jaundice;<sup>16</sup> both patients died. They stated in their

summary: "In two case reports presented there is strong likelihood that halothane caused jaundice and death due to liver damage. It is our opinion that given a certain set of circumstances, halothane anesthesia may prove to be hepatotoxic."

Next appeared a rather curious article in a British journal, written by American authors.<sup>17</sup> Heidenberg, Torio, and Cebula reported a nonfatal case of post-halothane jaundice and liver necrosis, and mentioned "20 cases of hepatitis after halothane anesthesia." They pointed out that "All documented cases of this complication, except one from Paris, have been reported from the United States. Although the agent was manufactured in Great Britain until approximately 6 months ago and the bulk of clinical trials were performed there, no cases have so far been reported from that country."

The observation made by Heidenberg, Torio, and Cebula was quickly answered by two reports, in two different ways. First, Chamberlain<sup>18</sup> reported a British case of post-halothane jaundice in which curettage, and later total hysterectomy, were performed and were followed by liver necrosis and death. To this, he added "a second, luckily non-fatal, case of jaundice following halothane anaesthesia."

In an analysis of halothane, Cohen and his associates<sup>19</sup> found the presence of a compound whose average concentration in freshly opened bottles was approximately 0.01 per cent, but "On one occasion it had increased 0.1 per cent during 5 days' use when the compound was stored continuously in a 'copper kettle' vaporizer." The compound has been shown to be toxic, and, in reply to the paper by Heidenberg, Torio, and Cebula, they note that "The wide use of copper vaporizers in this country as opposed to nickel-plated or glass vaporizers in many other countries may be significant."

Blackburn, Ngai, and Lindenbaum<sup>20</sup> reviewed pathological findings in 11 fatal cases reported in the literature and in 7 new cases. "During the past year," they wrote, "we have collected 5 more cases, of which 3 were fatal. Two additional fatal cases were obtained through the courtesy of Dr. B. B.



Briggs and J. Hansen of Riverside, California, and Dr. S. Landau of Nassau, New York." They referred also to the findings in two nonfatal cases. "A rough approximation of the incidence of hepatic injury after halothane anesthesia in this institution during the past 18 months yielded figures of 1 in 9,000 for fatal hepatic necrosis and 1 in 1,300 for nonfatal hepatic dysfunction."

Gordon reported two cases of post-halothane jaundice occurring in apparently healthy women who did not receive blood.<sup>21</sup> One patient died 27 days postoperatively, and acute yellow atrophy of the liver was found in post-mortem examination.

Keeri-Szanto and Lafleur<sup>22</sup> presented six fatalities following halothane-nitrous oxide anesthesia in patients with no known pre-anesthetic liver disease, and one recovery. In patients with preexisting liver disease, their figures indicate four hepatic deaths and one recovery after halothane anesthesia. "Calculations and considerations are presented to show," they said, "that blood transfusions or concurrent virus hepatitis are not likely to account for the observed complications."

Defalque and Stoelting reported in 1964,<sup>23</sup> a fatal case in a 54 year old male with cirrhosis of the liver. The patient underwent decompression laminectomy and developed lethargy 12 hours later, vomiting at 32 hours, jaundice at 48 hours, and died at 80 hours after surgery.

Herber and Specht<sup>24</sup> point out that the study of 599,548 patients reported in 1954 by Beecher and Todd included no deaths from hepatic necrosis, while cases of dysfunction and necrosis of the liver have been associated with the introduction of halothane. They present a study of all patients (approximately 20,000 anesthetics) who developed icterus during the first postoperative month over a five year period. Thirteen patients developed postoperative liver dysfunction; halothane was used in 12 patients, and three of them died of liver necrosis. These workers feel that halothane anesthesia is implicated as a cause of hepatic necrosis since the incidence of jaundice has increased along with their increased use of halothane.

During their study, at least as many anesthetics were given with other agents, but in this group there was only one case of postoperative jaundice, while there were 13 cases in the halothane group. They refer to other reports of 25 cases of post-halothane anesthesia liver necrosis in 23 patients, including 12 deaths. They feel that the incidence of dysfunction of the liver after halothane anesthesia "appears to be one case in about 800 anesthetics."

These reports fall into several distinct groups. First, it was suggested, on theoretical grounds, that any halogenated hydrocarbon, and halothane has five halogen atoms in each molecule, may be toxic to the liver. Next came the reports of liver damage, and in some cases, death. After this appeared the warnings and the request for sound statistical analysis. Following this, when the articles reporting jaundice and death continued, the story was made public in the lay press. Halothane was said to be hepatotoxic, it was "a valuable drug." A large statistical study was then requested. Then it was called an American disease; but there were both earlier and later reports of non-American halothane hepatitis. And a substance has been isolated which may be present, in significant amounts, "only in America." Is this a disease of halothane and copper? Is it a halothane disease?

Here are 18 reports of 66 cases of jaundice and 35 deaths. Here is a disease that occurs in institutions almost once in every thousand cases and whose mortality rate may be more than 50 per cent.

The trouble with anesthesia is that it is so safe. Where doubt has been raised, as it has here, going through a thousand cases without a death is an argument of too little strength to still the voice of suspicion. The mortality rate of anesthesia, if we are allowed to use such an expression, is only approximately one-sixteenth of one per cent. Studies containing only a few thousand cases will result in too wide a range in the number of deaths; there may be many or none at all. Such studies too often have a psychological or an emotional approach. They are too small, and the investigator has too often de-

Table 1

| Author                       | Cases | Deaths |
|------------------------------|-------|--------|
| Burns -----                  | 1     | 1      |
| Burnap -----                 | 2     | 1      |
| Virtue -----                 | 1     | 1      |
| Barton -----                 | 2     | 0      |
| Vourc'h -----                | 1     | 1      |
| Temple -----                 | 1     | 1      |
| Brody -----                  | 4     | 3      |
| Lindenbaum -----             | 9     | 1      |
| Bunker -----                 | 2     | 2      |
| Tornetta -----               | 2     | 2      |
| Heidenberg -----             | 1     | 0      |
| Chamberlain -----            | 2     | 1      |
| Blackburn -----              | 7     | 5      |
| Gordon -----                 | 2     | 1      |
| Keeri-Szanto & Lafleur ----- | 12    | 10     |
| Defalque & Stoelting -----   | 1     | 1      |
| McReynolds -----             | 4     | 1      |
| Herber -----                 | 12    | 3      |
| Totals -----                 | 66    | 35     |

cided, long before he is through, that the drug is "too good to lose." A few thousand cases will tell us little, and no agent is too good to lose. Where suspicion exists, as it does here, it can be silenced only by proper evidence and by a large set of unemotional figures, and not by a few who like the drug, who feel that its criticism is unwarranted, and who offer no serious statistical study of the problem. It was said, when the problem arose, that a large study was urgently needed; such a study has yet to be reported.

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Some 850,000,000 prescriptions were written in the United States during 1963.



# *What's Inside The Medica<sup>ke</sup>?*\*

**“T**HE Americans are still of the opinion that more is to be got for human happiness by private energy than by public legislation.”

That statement was written by Sir Henry Maine in his book, *“Popular Government,”* back in 1885, 80 years ago.

In 1965 how many Americans would have such an opinion? How many Americans really care about private enterprise? How many care about a free society? How many care about their freedom of choice?

Last week at the New York World's Fair the Daily News Public Opinion Poll showed that visitors rejected the welfare state by better than 3 to 2, saying that it destroys individual initiative.

Perhaps this anti-welfare state should be somewhat encouraging to the proponents of a free society. But in the same poll the question was asked: “Should retirement under Social Security be lowered to age 60?”

This time the vote was almost 3 to 2 in favor of lowering the age.

Amazing? I think it is. For people to reject the welfare state on the one hand because it destroys individual initiative and on the other hand to accept a federal system of regressive, or consumer, taxation to assist everyone over 60, rich and poor alike, is truly amazing.

It is even more amazing to me that too many Americans are *not* really worried about the federalization of their lives, their activities, their comings and goings. As long as the federalization is done in the name of a higher and better life — the Great Society . . . too many Americans consider the direct or indirect controls over their lives by the federal government as necessary or at the worst tolerable.

Today too many Americans are content to

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let Washington run things. We either don't trust ourselves or we leave the decisions to our leaders in Washington.

Everything from sex education to housing is a national problem, and of course, it requires a national solution. Even though our nation has always operated on the basis of competitive principles, too many Americans are ready and willing to be restricted . . . a little here and a little there . . . in the interest of the *national* solution to the *national* problem in order to reach the *national* goal.

Remember when fellows like Norman Thomas and Dr. Townsend wanted the working man to have a greater share of the pie. Of course, much of this was “pie-in-the-sky” but it did have some appeal.

But today those who know what is best for the rest of us are not offering pie; they present us with cake . . . a multi-layered cake with plenty of frosting.

The cake, of course, is for everyone . . . young and old, rich and poor, taxpayer or retired. How can it be ours? Not through private energy, of course, but through public legislation.

So the legislation diminishes freedom rather than enlarging it. So the legislation is restrictive and opposed to our traditions of freedom. What difference does it all make as long as there is some cake for all and as long as our leaders promise us that the legislation will lead us all to better life.

The latest cake that has been concocted for

\*Delivered before the Nebraska State Medical Association, Lincoln, Nebraska, April 27, 1965.



us is, of course, the "Medicake" . . . a multi-layered item heavily frosted to please as many elements of the public as possible. Well-hidden between other layers of the cake, and surrounded by the frosting, is the oft-rejected proposal called "Medicare," a bill that never could get anywhere standing alone.

Those who have concocted this layer cake are hoping, perhaps, that the "Medicare" layer of the cake will remain in its entirety because no one would want to destroy the rest of the cake.

They were so fearful the Medicare could not stand public scrutiny that the House Ways and Means Committee did not allow public hearings on the concoction. Then in the U.S. House of Representatives only one amendment to recommit was allowed, and after that was defeated there was only limited debate permitted.

So the six-billion-dollar cake is still in one piece. To its proponents the concoction is an angel cake; to its opponents it is a devil's cake; to taxpayers it will be a real "pound" cake, and in the senate Finance Committee I am hoping it will be a "hot" cake.

You may not have ever taken the time to look up the definition of the word "cake," but the other day I did. I was intrigued with the definition I found.

"Cake: a small mass of dough, sometimes unleavened, baked on both sides, or

"A sweetened composition of flour and other ingredients, leavened or unleavened, baked in a loaf or mass of any size or shape."

Well, after reading the Administration bill I am convinced that the cake is indeed a "mass of dough." But it is not so small and the "mass of dough" will come from the taxpayers in the form of higher Social Security payments and higher prices on products they use.

And, indeed, the "Medicake" is a sweetened composition baked in a mass of any size or shape. It is sweetened with such items as a cash benefit increase for Social

Security recipients. It comes in a mass of great size — 296 pages — and in any shape — including anything and everything from withholdings on the tips of waiters to the old, rejected King-Anderson bill.

Despite the proposal's mass, shape and size, the Administration wants to get this expensive caked baked in a hurry.

Congress has been asked — some might say "ordered" — by the President to vote on the proposal as quickly as possible. The House dutifully did just that. The emphasis seems to be: "Rush the bill through Congress. Let's hurry this thing through before the people have time to understand what it is all about."

But the measure is too complicated to rush! Its impact on the nation's economy and the future of the nation's health care system *would be* incredible. The cost of its financing *would be* staggering. The extent of its controls on hospitals, nursing homes, physicians and the nation's health team *would be* great indeed.

Why then all this haste to pass this "three-layer-cake" bill, the most far-reaching omnibus welfare bill in 30 years?

Here is a bill to add a compulsory hospitalization measure to the Social Security system, a system which heretofore gave beneficiaries *dollars* not benefits.

Here is a bill authorizing a federally-subsidized system of health insurance to cover medical and surgical and drug bills.

Here is a bill to expand the present Kerr-Mills law to cover dependent children and blind and disabled persons.

Here is a bill to include self-employed physicians under Social Security.

Here is a bill to increase Social Security cash benefits, give benefits for widows at age 60, amend the disability program, liberalize the earned income limitations in the retirement test, cover cash tips as wages, exempt the Amish and certain other religious sects from Social Security taxes and coverage, and many other items.

Many of these goals are fine in themselves.

But let's take time to think about doing them correctly!

Besides all this, this bill would raise the wage base for the Social Security tax on the employee and employer to \$5,600 annually instead of the present \$4,800. But this higher wage base would be in effect for only four years. Thus, the wage base for tax purposes would jump still higher to \$6,600.

Here is a bill that also would raise the Social Security tax rate from its present  $3\frac{3}{8}$  per cent to 4.35 per cent in 1966. Not only that, but this bill outlines a series of tax rate increases through the year 1987. By then the tax rate would be 5.6 per cent or almost two full percentage points more than it is now.

So this bill will raise the annual Social Security taxes of wage-earners and employers from the present maximum of \$174 each to \$243.60 in 1966, or an increase of \$69.60.

It will raise these same taxes to \$369.60 on the employee and \$369.60 on the employer by 1987.

Finally, here is a bill designed to cost an estimated 6.6 billion dollars in its first year of operation.

It is truly regrettable that the House Ways and Means Committee did not hold public hearings so that all the provisions of this measure could be thoughtfully examined by all who support it and by all who oppose it.

Is the American public to believe that its best interests will be served by the headlong rush to ram this legislation through Congress?

It is regrettable that the Committee gave no consideration to the Herlong-Curtis Eldercare bill, a proposal which offers a sound and sensible solution to the problem of helping the elderly who *need* help in financing their medical expenses.

The Eldercare bill gained more public support in the shortest period of time than any legislation on the health care for the elderly ever introduced in Congress.

Another independent poll in Colorado brought almost identical results.

A recently completed nationwide public opinion survey conducted by the Opinion Research Corporation of Princeton, New Jersey, showed that 74 per cent of the nation's adults favor the Eldercare proposal and only 14 per cent favor the Medicare-tax plan. Only 12 per cent of those polled had no opinion.

The mail to Congressmen and Senators also has been extremely heavy, and in most House and Senate offices the mail has been heavily in favor of the Eldercare plan.

The Eldercare plan serves the historic American principles of self-help and self-respect, for it allows the individual to make his own arrangements with his *own* money for the personal type of health care he himself decided upon.

Medicare backers continue to refer to the results of the November election, as their "mandate" for Medicare.

What about the mandate from the national poll, the Iowa and Colorado polls, and the hundreds of thousands of individually written letters and cards in favor of Eldercare?

Is not this outpouring of support for Eldercare at least a mandate for its consideration in Congress?

If the Administration really had a mandate for Medicare, why did it choose to make the measure a part of a "three-layer-cake" covered with as much frosting as it could possibly take?

The answer is simple, *Medicare never could stand on its own two feet!* It cannot stand alone now. It needs to ride on amendments and attachments: ideas *both* political parties supported in their 1964 platforms. The Medicarites hope Congressmen and Senators will vote for what is good in the entire measure, and Medicare will ride along.

Clever? Yes. A true vote on the merits of Medicare? No.

Remember that the bill which has passed the House will cost some 6.6 billion dollars.

That is three times the estimated cost of the Medicare portion of the bill.

When and if the great cake is sliced, it may have rich taste for some elderly. But for millions of employees and the self-employed the only slice they will get is one from their paychecks and from their earnings.

And what an expensive cake it will be for the nation. Next year the total Social Security tax deduction will bring in about 21.9 billion dollars, or almost 2.2 billion more than in 1965.

But then the cake for each succeeding year gets more expensive until the total Social Security tax take in 1972 reaches 33.2 billion dollars. That is an increase of more than 1.6 billion dollars a year to the taxpayers.

There's an old expression that you can't have your cake and eat it too. How true it is for the American taxpayer and the new three-layer cake.

I have said repeatedly that there is no national emergency which can possibly justify the hasty consideration of such a sweeping measure, a proposal which inevitably would damage the quality of health care for the American people while adding billions of dollars to the heavy burden now carried by the nation's wage-earners.

Let me also emphasize to you that federal control of hospitals, and the medicine practiced in them lies at the heart of the "medicare" legislations.

Throughout the "Medicare" bill *all* conditions of participation, and all other provisions, including services of hospitals, nursing homes and home health agencies, are controlled by the Secretary of Health, Education and Welfare.

These provisions make it clear that the Secretary will determine what is, and what is not, "reasonable cost" of services: he will command by rule and regulation whatever information he deems necessary and the methods by which it is provided.

Reviewing the many sections of the proposed "three-layer-cake" has convinced me that provision of health care to the elderly is of secondary importance and merely incidental to the underlying purpose of the bill.

The primary purpose seems to be to use the payment of tax funds to hospitals and nursing homes as a device to federalize the nation's hospital system.

The betterment of the public health was one of the goals the founding fathers of the American Medical Association were aiming for when the Association was organized in 1847. The betterment of the public health continues to be the Association's goal.

That is why the AMA has been speaking out on the health care issue, for the "medicare" tax proposal is bad legislation. It would *not* be conducive to the *betterment* of the public health. It would result in a deterioration in the quality of medical care and interfere with the highly personal doctor-patient relationship.

My conclusion is that this "cake" should not have been concocted.

Perhaps some may say that it is too late, that we should quit, that we should not fight against such overwhelming odds —

In a speech 24 years ago, Sir Winston Churchill told the boys at his old school, Harrow, on the northern outskirts of London:

"Never give in. Never give in. Never, never, never, never, in anything great or small, large or petty — never give in except to convictions of honor and good sense."

Keep up the pressure, write, phone your senators.

Well, gentlemen, as a physician my freedom is at stake. So is yours, and so is medicine's.

I intend to fight for it. I ask you to join me!



## Coming Meetings

### CRIPPLED CHILDREN'S CLINICS—

June 5 — Norfolk, Norfolk State Hospital

June 19 — Hastings, Mary Lanning Hospital

July 10 — Chadron, Elks Club

July 24 — Ogallala, Elks Club

**THE AMERICAN COLLEGE OF PHYSICIANS** — Will present Postgraduate Course No. 16, "Basic Principles in Internal Medicine," on June 7-11, 1965, at the Auditorium, College of Pharmacy, University of Iowa, Iowa City, Iowa. Fees: A.C.P. Members, \$60; Nonmembers, \$100. Registration forms and information requests are to be sent to Edward C. Rosenow, Jr., MD, Executive Director, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.

**AMERICAN CANCER SOCIETY** — 1965 Scientific Session — Drake Hotel, Philadelphia, June 16, 1965. Info: Director of Professional Education, American Cancer Society, 219 East 42nd Street, New York 10017.

**THE GREAT PLAINS INDUSTRIAL MEDICAL ASSOCIATION MEETING—** June 19, 1965, Omaha, Nebraska. For information contact: G. P. McArdle, MD, 1216 Medical Arts, Omaha.

**THE 7th ANNUAL AMA-ASHA PRECONVENTION SESSION ON SCHOOL HEALTH** — Will be held on the evening of June 20, 1965, in conjunction with the AMA Annual Convention in New York City. All physicians, educators, dentists, and nurses are invited. For additional information, write to the Department of Community Health and Health Education, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

**COMMUNICATION BETWEEN PHYSICIANS AND NURSES IN THE HOSPITAL** — An afternoon program concerning nurse-physician communication will be sponsored by the AMA Committee on Nursing, and is to be held at the Barbizon

Hotel in New York on June 22, during the 114th annual convention of the AMA. For information, write to the Department of Nursing, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

**THE ANNUAL MEETING OF THE AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION** — Will be held on August 22-27, 1965, at the Sheraton Hotel, in Philadelphia.

**AMERICAN ASSOCIATION OF BLOOD BANKS** — 18th annual meeting; Americana Hotel, Bal Harbour, Florida, September 14-17. Info: The Association at 30 North Michigan Ave., Chicago 2.

**OCCUPATIONAL HEALTH CONGRESS—** The 1965 Congress on Occupational Health, sponsored annually by the AMA Council on Occupational Health, will be held concurrently with the Indiana State Medical Association's annual convention. The meeting will take place at the Murat Temple in Indianapolis, October 12-14. Additional information may be obtained from: Department of Occupational Health, AMA, 535 North Dearborn Street, Chicago, Illinois 60610; or from the Indiana State Medical Association, 3935 North Meridian Street, Indianapolis, Indiana 46208.

**1965 POSTGRADUATE COURSES SPONSORED BY THE AMERICAN COLLEGE OF CHEST PHYSICIANS** — Clinical application of cardiopulmonary physiology: Knickerbocker Hotel, Chicago, October 18-22. Diagnosis and treatment of diseases of the heart and lungs: Barbizon Plaza Hotel, New York City, November 15-19. What's new in the diagnosis and treatment of cardiovascular and pulmonary diseases: Fountainebleau Hotel, Miami Beach, January 24-28, 1966. Clinical application of cardiopulmonary physiology: Ambassador Hotel, Los Angeles, February 14-18, 1966. Cine-angiographic techniques in cardiovascular diseases: Cleveland Clinic, Cleveland, April 11-13. Write to: American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

THE OMAHA MID-WEST CLINICAL SOCIETY'S 33rd ANNUAL FOUR-DAY POSTGRADUATE ASSEMBLY — Will convene in the Civic Auditorium, October 25, 26, 27 and 28. This program is acceptable for 32 accredited hours by the American Academy of General Practice.

ANNUAL OTOLARYNGOLOGIC ASSEMBLY of 1965 — Will be held October 30 through November 5, in the new Illinois Eye and Ear Infirmary at the Medical Center, Chicago. The Department of Otolaryngology of the University of Illinois College of Medicine offers a condensed postgraduate basic and clinical program for practicing otolaryngologists under the direction of Doctor Emanuel M. Skolnik. It is designed to bring to the specialists current information in medical and surgical otorhinolaryngology. Info: Department of Otolaryngology, College of Medicine of the University of Illinois at the Medical Center, Chicago Box 6998, Chicago, Illinois 60680.

FIRST NATIONAL CONFERENCE ON AREAWIDE HEALTH FACILITIES PLANNING, AMA — Americana Hotel, Bal Harbour, Florida, November 28-29, 1965.

Future Meetings of the American College of Surgeons—

ANNUAL CLINICAL CONGRESS, October 18-22, 1965, Atlantic City, New Jersey.

— 1966 —

BAL HARBOUR, FLORIDA, January 13-15. Sectional Meeting. Americana Hotel.

HOUSTON, TEXAS, January 31 - February 2. Sectional Meeting. Sheraton-Lincoln Hotel.

CLEVELAND, OHIO, March 14-17. Annual 4-Day Sectional Meeting for Doctors and Graduate Nurses. Sheraton-Cleveland and nearby hotels.

ANNUAL CLINICAL CONGRESS, October 10-14, 1966. San Francisco, California.

For any advance information address: Secretary, American College of Surgeons, 55 East Erie Street, Chicago, Illinois 60611.

THE HAHNEMAN MEDICAL COLLEGE AND HOSPITAL of Philadelphia offers the following Postgraduate Education Courses during 1965 and 1966:

—July 26-30, 1965: Interpretation and Therapy of Cardiac Arrhythmias; Dr. Dreifus; Hahneman CVI Building.

—November 22-24, 1965; 15th Hahneman Symposium Cancer Chemotherapy; Dr. Isadore Brodsky; Sheraton Hotel.

—December 8-10, 1965: A Hahneman Symposium on New Concepts in Gynecological Oncology; Dr. George C. Lewis; Sheraton Hotel.

—April 20-23, 1966: 16th Hahneman Symposium, Arterial Occlusive Disease; Dr. Albert N. Brest; Marriott Motor Hotel.

—December, 1966: 17th Hahneman Symposium, Nutritional Dysfunction; Dr. Donald Berkowitz; Sheraton Hotel, Philadelphia.

ANIMAL CARE PANEL — 16th Annual Meeting; Sheraton Hotel, Philadelphia; November 15-19, 1965. Contact Mr. Joseph J. Garvey, Executive Secretary, 4 East Clinton Street, Joliet, Illinois 60434.

SECOND NATIONAL SYMPOSIUM ON COCCIDIOIDOMYCOSIS — December 8-9-10, 1965, Del E. Webb Towne House, Phoenix, Arizona. For further information, contact: Arizona Tuberculosis and Health Association, Inc., 733 West McDowell Road, Phoenix, Arizona 85007.

CONTINUING EDUCATION — Closed Chest Resuscitation; University of Nebraska College of Medicine, at Eppley Research Institute, March 8, 1966 (for physicians, 9th for dentists, and 10th for nurses). Info: Continuing Education, University of Nebraska College of Medicine, 42nd and Dewey, Omaha 5.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS — "Vision for the Space Age;" Houston, Texas, Rice Hotel, March 24-26, 1966. Info: Director of Information John D. Coleman, 16 East 40th Street, New York 10016.



## Medicare in Operation

### Coverage for Outpatient Care—

Although Medicare provides primarily for professional services during hospitalization and does not permit medical care normally considered to be outpatient care at Government expense, certain limited benefits are authorized as indicated.

1. Payment is authorized in an amount not to exceed \$75 at government expense for necessary diagnostic tests performed or authorized by the attending physician prior to being hospitalized for the same injury or surgery performed while the patient is hospitalized.
2. Payment not to exceed \$50 for necessary tests for proper after care of the same injury or surgery performed while patient is hospitalized.
3. The authorized payment for the treatment of a bodily injury when a patient is hospitalized.
4. The authorized payment for the treatment of a bodily injury when a patient is not hospitalized, including any diagnostic and therapeutic tests and procedures authorized by the attending physician, is limited to the treatment of fractures, dislocations, lacerations, and other wounds. The patient or the sponsor is, however, required to pay the first \$15 of the physician's charge for allowed services.

Those instances during the period of hospitalization when treatment by the use of X ray, radium, or radio-isotopes is prescribed, may be carried out on an outpatient basis. The allowance payable to a physician or surgeon for treatment in a hospital for an approved surgical procedure or a bodily injury shall include pre-hospitalization care and normal after care.

## Announcements

### AMA Convention Will Be Held June 20-24—

The largest AMA convention in history will be held June 20-24 in New York City.

69,500 persons, including 25,000 physicians, are expected to attend. Doctor James Z. Appel of Lancaster, Pa., will be installed as AMA president. There will be six general scientific sessions; more than 350 scientific exhibits will be housed in the New York Coliseum. The House of Delegates will meet in the Americana Hotel.

### Applications Being Accepted for Western Hemisphere Nutrition Congress—

An AMA news release announces that applications are now being accepted from those who wish to attend a Western Hemisphere Congress on Nutrition in Chicago, November ?? to 11. Applications are to be addressed to the Department of Foods and Nutrition, AMA 535 North Dearborn, Chicago, Illinois 60610. Applications must be made by July 1st.

### Sixth Biennial Institute on Recreation and Camping at Camp Kysoc in Kentucky—

The sixth biennial Institute on Recreation and Camping will be held at Camp Kysoc, Carrollton, Ky., beginning September 9th. A three-day session is planned to bring together city directors, health and welfare agency camping directors, and Easter Seal camp administrators and agency board members, and is sponsored by the National Society for Crippled Children and Adults (the Easter Seal Society, and is hosted by the Kentucky Society for Crippled Children). Further information may be obtained from Dr. Lois J. Hardt, National Society for Crippled Children and Adults, 2023 West Ogden Ave., Chicago, Illinois 60612.

### Eli Lilly Introduces C-Quens—

Eli Lilly and Company announces the introduction of C-Quens, "a regimen of oral contraceptive drugs given in a sequence which closely resembles the order of hormonal events in the natural menstrual cycle."

### New Ultra Short-acting Anesthetic—

Dr. Edward F. Domino, Peter Chodoff, and Guenter Corssen, of the University of Michigan Medical Center, recently reported on the human studies of a new anesthetic,



CI-581, before the Federation of American Societies for Experimental Biology; the agent has been studied by Parke, Davis & Company research laboratories since 1956. Dr. Domino stated that recovery from analgesia and anesthesia usually occurred within 10 minutes, and complete normalcy took place within one to two hours. No serious toxicity was noted. Two Parke-Davis research groups also reported their studies of CI-581. Dr. Duncan A. McCarthy and Dr. G. M. Chen reported on its general anesthetic action, while Tsun Chang, W. A. Dill, and Dr. A. J. Glazko discussed metabolic disposition of the drug in animals and in man.

#### **Annual Meeting of Academy of Psychosomatic Medicine, Chicago, October 11-13—**

The annual meeting of the Academy of Psychosomatic Medicine will be held in Chicago, October 11-13, 1965.

Since these sessions will overlap with those of the American Society of Clinical Hypnosis, the two groups will hold a joint morning meeting and luncheon on October 11. Dr. Jules Masserman, professor of psychiatry, Northwestern University School of Medicine, will be the luncheon speaker.

During the Academy's scientific sessions, reports will be presented on psychosomatic problems of children, college students and the aged. Emphasis will also be placed on digestive and eating disorders, heart disease and stomach malignancies. Dr. George R. Pollock, director of the Chicago Institute for Psychoanalysis, will deliver the annual Franz Alexander Memorial Lecture, on October 12.

At the Academy's annual business meeting, Dr. Victor Szyrnski, of Ottawa, Canada, will succeed Dr. Betram B. Moss, as president.

#### **American Heart Association Announces Research Support—**

Applications may now be sent by research investigators to the American Heart Association for support of studies during the fiscal year beginning July 1, 1966. This support includes established investigatorships, advanced research fellowships, grants-in-aid, and a program of emergency grants. Addi-

tional information and application forms may be obtained from the Director of Research, American Heart Association, 44 East 23rd Street, New York, N.Y. 10010.

#### **American College of Cardiology—**

The American College of Cardiology announces its Young Investigators' Awards for 1966, including the top award of a silver medal and \$1,000, honorable mention of \$250, and eight \$100 awards. The competition is open to physicians holding a residency or fellowship now or within the last three years. Inquiries and manuscripts are to be addressed to: Executive Director, American College of Cardiology, Empire State Building, 350 Fifth Avenue, New York, N.Y. 10001. This is supported by a grant from Roche Laboratories, Inc.

#### **Peace Corps Opportunity—**

The Hacettepe Medical Center in Ankara is in need of volunteers "from every medical profession" in a medical project among urban slum dwellers. This includes physicians, nurses, dentists, librarians, dieticians, and technicians. Information may be obtained from: Public Affairs, Peace Corps, Washington, D.C. 20525.

## **Doctors in the News**

#### **Industrial Medicine Honor—**

What is called by the American Industrial Health Conference "the highest honor in the field of industrial medicine" was received by Robert E. Eckardt, MD, of Linden, N.J., upon whom the Industrial Medical Association conferred the William S. Knudsen Award. The award and presentation of a symbolic plaque were made at the banquet of the Association's 50th annual meeting in Bal Harbour, Florida.

## **News and Views**

#### **Smith Kline & French Foundation Grants—**

Last year's grants disbursed by the Smith Kline & French Foundation totaled more than 861 thousand dollars, while the total

since its establishment in 1952 amounts to over seven million dollars. We are pleased to note the grant, "University of Nebraska Foundation, Lincoln, support for the College of Medicine, Dr. Cecil L. Wittson, Dean."

#### Teaching of Optometry Students by Physicians—

We note in *The Ophthalmologist*, which is published by the National Foundation for Eye Care, that the degree of Doctor of Optometry is to be conferred on graduates of Ohio State University's School of Optometry on completion of six years' training, and that it was proposed that medical faculty members teach medical subjects to the optometry students. The Council of the Ohio State Medical Association then wrote to the O.S.U. Board of Trustees, requesting that no faculty member holding an M.D. degree be requested to teach medical subjects to a student in the School of Optometry. Department of Ophthalmology members were instructed by a directive to prepare to instruct the optometry students. No member of the medical faculty consented to instruct these students, and the directive was withdrawn.

#### AMA Loan Program—

We see in an AMA release that one-sixth of American medical students, interns, and residents are assisted by a loan program started by the AMA three years ago. Medical students may borrow \$400 to \$1500 annually and up to \$10,000 over seven years.

#### News from HOPE—

We note in HOPE News, "A Ship Called HOPE," by HOPE President William B. Walsh, MD, has been selected for the winter 1965 edition of Reader's Digest Condensed Books. In addition, a special article by Eugene Burdick, "The HOPE Sails On," will complement the condensed book.

#### Measles Vaccine—

An AMA news release cites a recent study by Karelitz, Kanchanavatee, Arai, Acs, and Schluenderberg (*JAMA*: March 29) that states that infants can be effectively vaccinated against measles as early as three to

six months of age. The vaccination is done with "killed virus" vaccine; the protection is partial. More complete immunization can be given at age nine months to one year by vaccination with live-virus type vaccine.

#### Hospital Expense Insurance Provided by Insurance Companies—

The Health Insurance Institute states that more than sixty million Americans were protected by group programs of hospital expense insurance provided by insurance companies. This is an increase of 27 million people having group coverage under insurance companies' programs in 1953, equivalent to a rise of 80 per cent.

#### 1964 Was a New High for Nursing School Admissions—

The National League for Nursing has announced that United States nursing school admissions amounted to 92,300 in 1964, which is an all-time high, surpassing the 1963 admissions by over ten thousand or by 12.7 per cent.

#### Safety in the Hospital—

Three hundred and sixty-five hospitals completed a contest concerning safety among hospital employees. Ninety of these hospitals finished the contest with perfect records, according to the A.H.A. The winner of the contest, which was sponsored by the American Hospital Association and the National Safety Council, was the Veterans Administration Hospital in Columbia, S.C., having completed the largest number of man-hours since its last reportable injury.

#### Pioneer to Retire—

Nebraska Blue Cross Blue Shield announces that Francis J. Bath, assistant administrator of Creighton Memorial Saint Joseph's Hospital, will retire after a service of 35 years. He was one of the incorporators of Nebraska Blue Cross and has been on its Board and Executive Committee since 1939.

#### Past 64!—

Blue Cross membership in the United States and Canada reached an all-time high



of far over 64 million in the fourth quarter of 1964. We congratulate Blue Cross; this is an impressive number, large enough even to impress some of our friends in Washington.

#### Health Forums—

Rhode Island Congressman John E. Fogarty is to deliver the keynote address at the final Philadelphia Forum of the National Conference on Community Health Services in Philadelphia, September 29. He will speak on "The Health Services Challenge to American Communities: 1965-1985."

Other forums: for the western states, in San Francisco, September 8-11; for the middle states, in Chicago, September 15-18; for the southern states, in Atlanta, September 22-25.

#### The Auxiliary Convention—

Rep. Catherine May (R., Wash.), and Harold Russell will speak at the annual convention of the Woman's Auxiliary to the AMA in New York. Mr. Russell is chairman of the President's Committee on the Employment of Handicapped; he will be remembered for his Academy Award movie portrayal of a handicapped veteran.

## Human Interest Tales

Doctor and Mrs. Fay Smith were honored at an open house by the Imperial Chamber of Commerce in early April.

Doctor Joseph D. McCarthy, Omaha, has been named vice president of the National Board of Medical Examiners.

Doctor Robert Hillyer, Lincoln, was the featured speaker of the Dodge County Cancer Society at the groups February meeting.

Doctor William F. Becker is leaving Lynch for duty in the military service. Doctors Mark L. Whitney and I. G. Althouse, Omaha, will assume the practice of Doctor Becker.

Doctor Harold N. Neu, Omaha, was recently cited for his leadership as state chairman of the Nebraska Medical Advisory Commit-

tee for the National Foundation March of Dimes.

Doctor Wayne Brewster, Holdrege, recently returned from the meeting of the International Board of Proctology held in New Orleans. Doctor Brewster was awarded the degree of Diplomate of the organization.

Doctor G. Prentiss McArdle, Omaha, is serving as the 1965 Chairman of the Go Greater Omaha Committee of the Omaha Chamber of Commerce. The main objective of the committee is to assist the President's Club in obtaining permanent adequate financing for the Chamber's projects.

## The Woman's Auxiliary

#### Fortieth Annual Business Meeting—

The 40th annual meeting of the Woman's Auxiliary to the Nebraska State Medical Association was called to order by the president, Mrs. John A. Brown, III. The invocation was given by Mrs. Frank Stone, chaplain, who also led the members present in repeating the Auxiliary pledge.

The president welcomed members and guests present for the meeting. She introduced Mrs. Virgil Ray Forester of Oklahoma City, Oklahoma, National Safety Chairman of the Woman's Auxiliary to the American Medical Association, who would be the honored speaker at the Wednesday luncheon. Also introduced as an honored guest for the meeting was Mrs. Finley Boe, president of the Iowa Woman's Medical Auxiliary.

Recognition of Past State Presidents of the Auxiliary who were present was made. Each gave her name and year of service. Present were Mesdames P. O. Marvel, J. P. Donelan, G. W. Covey, C. H. Farrell, W. W. Waddell, R. E. Garlinghouse, and R. B. Rundquist.

District councilors and members-at-large present were introduced.

Reading of the minutes of the 39th annual business meeting were dispensed with, as they were printed in the October 1964 State



Medical Journal. There were no corrections or additions, and they were approved as printed.

Mrs. Fay Smith took the chair during the president's report: "It has been my privilege and honor to serve you as President of the Woman's Auxiliary. It has been rewarding to observe the outstanding work being accomplished by varying groups in varying phases of the Auxiliary program. Everywhere there has been friendliness, activity, and interest as we have worked together for "Better Health in a Better World."

This is the end of our Auxiliary year. It is time to evaluate our programs. Auxiliaries, as well as other organizations, sometimes go along year after year without taking stock of themselves and their program. Projects and programs must be tailor-made for the Auxiliary, the community, and the times."

#### Report of Officers—

Mrs. J. Whitney Kelley, president-elect, stated that the Fall Conference in Chicago, was most enlightening; she expressed delight in her invitation and attendance at the Iowa State Auxiliary convention. Two WASAMA meetings were attended and Mrs. Kelley stressed the opportunity afforded Medical Auxiliary in encouraging and aiding the WASAMA groups.

Mrs. Fay Smith, 1st vice president, stated that in her duties for the ensuing year she will look forward to "being auxiliary, living auxiliary, thinking auxiliary" and will encourage membership.

Second vice president, Mrs. A. L. Smith, Sr., gave a summary of the members-at-large report. A total of 70 members-at-large was reported for '64-'65.

Mrs. R. B. Rundquist, advisor, commended Mrs. Brown and the Auxiliary for a successful year.

Mrs. Arthur Offerman gave the financial report for Mrs. Clinton Millett, treasurer. There being no questions or corrections, the report was accepted to be placed on file and the balance entered in the secretary's

minutes. The balance on hand was \$857.60 as of April 27, 1965.

Mrs. Offerman, as chairman of the auditing committee, stated the books were audited and correct. A motion was made to accept the report, seconded and carried.

Mrs. Offerman as chairman of Budget and Finance then gave the financial report. A motion to accept the report was made, seconded, and carried, and the report was placed on file.

A recommendation from the Executive board was presented that Auxiliary funds in the sum of \$200 be given to AMA-ERF and that the sum of \$25 be contributed to the Creighton WASAMA group and a sum of \$25 be contributed to the University of Nebraska WASAMA group, the WASAMA contributions to be stipulated for use for their Chicago convention. A motion was made, seconded, and carried to accept the recommendations.

Mrs. Offerman read the proposed budget for 1965-66. A motion was made to accept the budget as presented. Motion was seconded and carried.

#### Reports of Standing Committees—

These reports were given in detail at the pre-convention Board meeting and a summary was made at this time by Mrs. S. H. Perry for the committees under Program. Mrs. Perry stated that the official publication of the Woman's Medical Auxiliary is sent to all members, covered by an increase in National dues from \$1 to \$2 per year. With the addition of the auxiliary gift, the Nebraska AMA-ERF total contribution for National is \$2,251.19. A report of contributions for the Nebraska Medical Foundation, May 1, 1964 through April 5, 1965 showed a total of \$3,102.09. The work of the Legislation committee has been the informing and re-supplying of legislation news and bulletins to our own members, officers, the allied medical professions, and the lay public.

Mrs. Fay Smith read her communication to members which had been published in the Newsletter.

Mrs. Vernon Graves Ward, Community

Service Chairman, summarized the committee reports of the committees that prove medicine's concern for the welfare of the community through community service, namely: Disaster Preparedness, Health Careers, International Health Activities, Mental Health, Rural Health, and Safety. Each committee chairman worked diligently at the promoted materials and projects for the county auxiliaries.

General Committee reports from Blue Cross-Blue Shield, Historian, Parliamentarian, Newsletter, and Publicity chairman were heard or read by the secretary in the absence of chairman.

Mrs. W. W. Waddell, National Regional Chairman, North Central Region, Community Service, was introduced and she stated her report has been sent to National.

A motion was entertained to accept these officer and committee reports. It was seconded and carried. The reports will be placed on file.

Mrs. A. L. Smith, Sr., read the Resolutions and Revisions report. A motion was made, seconded, and carried that this report be accepted. The Resolutions will be published in the Nebraska State Medical Journal.

#### County President Reports—

Adams County — Mrs. Russell McIntire

Buffalo County — Mrs. Albert Mueller;  
Mrs. V. Ward reporting

Dawson County — Mrs. Wm. B. Long;  
Mrs. S. H. Perry reporting

Douglas County — Mrs. James F. Kelly

Four-County — Mrs. Otis Miller; Mrs.  
Cram reporting

Gage County — Mrs. C. T. Frerichs

Hall County — Mrs. Charles D. McGrath  
(no report)

Lancaster County — Mrs. Frank Cole

Lincoln County — Mrs. Melvin Hoyt

Madison-Six — Mrs. D. J. Nagengast; re-  
port prepared by Mrs. James Carlson

Northwest — Mrs. L. H. Hoebet

Otoe — Mrs. C. J. Formanack (no report)

Platte County — Mrs. Robert Burns

Scottsbluff — Mrs. W. E. Holmes

Sixth Councilor District — Mrs. Roger  
Meyer

Tri-County — Mrs. Alexander Harvey

A motion was made to accept these reports as given. A second was heard and the motion was carried.

It was announced that the Senior Student Wives' dinner program would be held in Omaha in the fall, date to be announced, with Mrs. Barney Reese, in-coming president of Douglas County, to be in charge.

The proposal of "team membership" was discussed, this meaning that the auxiliary member's dues be covered with the doctor's dues paid to the doctors' Association and then passed on to the auxiliary. No action was taken.

A recommendation of recognition of Dr. Covey's efforts in behalf of Auxiliary in the State Journal was made. It was suggested that this had been done in Resolutions.

A recommendation was made that the four lay ladies of Douglas County who have worked so valiantly for Eldercare be invited to the Wednesday luncheon. A motion was made, seconded, and carried for same. A motion was made that money for guest tickets be taken from the convention fund. Motion was seconded and carried.

Mrs. C. H. Farrell moved that Nebraska Woman's Auxiliary convention go on record as advocating Mrs. Virgil Ray Forester for a National office and to submit to National Nominating Committee the name of Mrs. Forester for National office. The motion was seconded and carried.

At this time Mrs. Frank Stone, chaplain, conducted an impressive memorial service for deceased members of the past year. Those remembered were:

Mrs. Carl G. Amick, Loup City

Mrs. A. A. Ashby, Geneva

Mrs. Clarence Emerson, Lincoln

Mrs. Paul J. Heidrich, Lincoln

Mrs. C. J. Miller, Ord

Mrs. E. W. Rowe, Lincoln

Mrs. J. R. Schenken, Omaha  
Mrs. Donald Watson, Gordon

AMA-ERF awards were presented by Mrs. H. W. McFadden, Jr., as follows:

Membership basis 1-25—  
per capita award to Gage County  
Membership basis 26-60—  
per capita award to Tri-County  
Membership basis 100 and over—  
per capita award to Lancaster County

Mrs. Brown announced the date of the AMA convention in New York City, June 20-24. She requested that anyone who will attend this meeting, kindly contact Mrs. Brown or Mrs. Kelley for necessary credential cards so that Nebraska might fill the roll of its allotted delegates.

Mrs. R. B. Rundquist, chairman of the nominating committee, gave the report of committee. Nominations were:

Mrs. J. Whitney Kelley — President  
Mrs. Fay Smith — President-elect  
Mrs. A. L. Smith, Sr. — 1st Vice President  
Mrs. S. H. Perry — 2nd Vice President  
Mrs. Virgil Norall — Director 1 Year  
Mrs. H. A. Jakeman — Director 1 Year  
Mrs. Loyd Wagner — Director 2 Years  
Mrs. James P. Donelan — Director 2 Years  
Mrs. Jack Kaufman — Treasurer

There were no nominations from the floor. A motion that the slate of officers proposed be accepted was seconded and the motion carried.

Mrs. J. Whitney Kelley appointed Mrs. Chester Farrell as recording secretary and Mrs. John Filkins as corresponding secretary. Mrs. Alexander Harvey was appointed as Chaplain.

The installation ceremony was conducted by Mrs. Frank Stone.

Mrs. John Brown presented the President's gavel to Mrs. Kelley. Mrs. Kelley said that she deems it a great honor and privilege to be the 1965-66 president of Aux-

iliary and expressed the desire to merit the faith placed in her.

Mrs. Brown adjourned the meeting.

Mrs. Harlen L. Papenfuss,  
Secretary.

Woman's Auxiliary, NSMA, Annual State  
Convention Executive Board Meeting,  
April 27, 1965; Report: Resolutions and  
Revisions Committee—

WHEREAS, we consider it fitting and proper to express our thanks to all those who have contributed to the success of this convention and the accomplishments of our past year's work; therefore be it

RESOLVED, that we, the members of the Woman's Auxiliary to the Nebraska State Medical Association, extend our grateful thanks to the officers and other members of the Executive Board of our organization who have so ably carried on the business necessary for the proper functioning of the Auxiliary; and be it further

RESOLVED, that our thanks and appreciation go to the Woman's Auxiliary to the Douglas County Medical Society, hostess to this fortieth Annual Meeting, for the welcome hospitality extended to all of us; be it further

RESOLVED, that we express particular gratitude to Mrs. James F. Kelly, Jr., Convention Chairman, and to all of her committee chairmen for their work and thoughtfulness in planning for our convenience and entertainment; and be it further

RESOLVED, that the Nebraska State Medical Association be advised that we appreciate their leadership and assistance, and that in particular, the Advisory Committee, namely: Dr. R. E. Garlinghouse, President of the Nebraska State Medical Association; Dr. E. G. Brillhart, Dr. G. Kenneth Muehlig, Dr. Paul S. Read, Dr. Sam Perry, Dr. Lynn E. Sharrar, and Dr. James Mabie, be informed of our gratefulness for their helpfulness and guidance throughout the year; and be it further

RESOLVED, that Dr. George Covey, Editor of the Nebraska State Medical Jour-



nal; Mr. Kenneth Neff, Executive Secretary of the Nebraska State Medical Association; Mr. William Schellpeper, Assistant Executive Secretary of the Nebraska State Medical Association; Mrs. Mary Churchill and Miss Judy Sanburg, be advised of our sincere thanks for the efficient way they have handled our Auxiliary News and for their ever-ready assistance whenever we have asked for it; and be it further

RESOLVED, that the Blue Cross-Blue Shield organization know that we are grateful for their generosity in providing materials which have facilitated the transaction of our business during the meetings; and be it further

RESOLVED, that we express our thanks to Topp's for the style show; to the Omaha World-Herald, the Lincoln Star and Journal; to the Sheraton-Fontenelle Hotel; and be it further

RESOLVED, that we repledge our loyalty and devotion to the Woman's Auxiliary to the Nebraska State Medical Association; that we continue to be faithful in supporting its activities, promoting projects, and protecting its reputation and high ideals; and be it finally

RESOLVED, that these resolutions be published in the Nebraska State Medical Journal.

Respectfully submitted,

Mrs. Arthur L. Smith, Sr.,  
Chairman.

The Resolutions and Revisions Committee has had no meeting since the revised Constitution and By-Laws was read at the 1961 Annual Meeting.

Respectfully submitted,

Mrs. Arthur L. Smith, Sr.,  
Chairman.

#### Auxiliary Message from Immediate Past-President—

It is usual for the President to review the year's activities; however, I wish to avoid the duplication of other reports which are

presented by Committee Chairmen or County Auxiliary Presidents.

My activities have been largely organizational. There was a time-consuming activity to update the names on the doctors' wives' mailing list; we believe the list to be current and accurate. At another stage, a group of past presidents worked with me to sort and condense old auxiliary files.

And there were meetings: the AMA-ERF Workshop and the State President's Conference in Chicago; soon the Student Wives' Dinner in Omaha. Organized was the first Workshop, held in conjunction with the Fall Board Meeting, scheduled at the time of the Omaha Mid-West, purposely delayed until after the Conference in Chicago. There were four state-wide executive board meetings during the year.

There was an "exchange visit" with a sister-state Auxiliary, when your president-elect and I spent two days at the Iowa Annual Meeting (two Iowa Auxiliary officers in turn attended our State Convention). I visited 13 of the 16 Auxiliaries in the State—I made every effort to visit *all* 16. It was another "first" to utilize the air line—one flight per day, one auxiliary per day. "Had gavel—did travel."

Now, at the end of the Auxiliary year, is the time to evaluate our programs. Auxiliaries—as well as other organizations—sometimes go along year after year without taking stock of themselves and their programs. Projects and programs must be tailor-made for the Auxiliary, the community, and the times.

I will remind you that I told you a year ago at this time that we are a unique group, this organization of doctors' wives. We have talked of our unique requirements for membership. As a part of this group of doctors' wives, we have a special responsibility.

As I remarked when I visited your county Auxiliaries, there were so many things which I learned, which I wanted to share with you—in such a short time. It is most unfortunate that we have accumulated this knowledge at the *end* of our term in office.

I would like to thank each of you for making my year as your president a most rewarding and satisfying year. I am told that enthusiasm is contagious; I have tried to expose others, as I became more knowledgeable and more aware. If some of this enthusiasm has rubbed off on you, then my year in serving you has been a success.

Mrs. John A. Brown, III,  
Immediate Past-President,  
Woman's Auxiliary.

**Adams County—**

The film "So You Are Growing Up" was presented April 19th, 20th, and 22nd to approximately 260 children and 200 parents. Mrs. Clyde Kleager presented the program to girls; Dr. Gerald Holcomb presented it to the boys. Mrs. Leo Weiler and Dr. Russell McIntire assisted.

**Dawson County—**

The Dawson County Medical Association and auxiliary met April 5th at the Parkway Cafe in Lexington with 13 doctors and wives present. Dr. and Mrs. Vernon Ward of Kearney were guests. Following dinner, Dr. Ward spoke to the doctors on "Causes and Treatment of Obesity."

The auxiliary met at the home of Dr. and Mrs. Olsson. Officers for this year were re-elected and committees were appointed, with Mrs. Wm. Long as President; Mrs. O. P. Rosenau, Vice President, and Mrs. J. V. Scholz, Secretary.

A letter of acknowledgment and gratitude was read from Dr. Cecil Wittson of the University of Nebraska for contributions to the AMA-ERF.

It was voted to revise some of the rules for administering our Nurse's Loan Fund. Four area students are currently using money from this fund, and applications from three more were received.

Mrs. Perry reported on various Congressional developments concerning health care. Again all were urged to write Congressmen on this matter.



## Know Your Blue Shield Plan

From the National Association of Blue Shield  
Plans Newsletter—

*Total Enrollment for 84 Blue Shield Plans* reached 56,256,776 at the end of 1964. This was a membership gain of approximately 2.8 million members or 5.25 per cent over the total enrollment at the end of 1963. Five new Plans with a combined membership of over a million persons were approved by the Association during the year. The new Plans are located in Seattle, Tacoma and Spokane, Washington; Edmonton, Alberta, and Santurce, Puerto Rico.

*Blue Shield* now covers 26.97 per cent of the total United States population, and 25.64 per cent of the total Canadian population.

*Dr. Fredrick H. Good*, a general surgeon from Denver, was elected president of the National Association of Blue Shield Plans at the Blue Shield Annual Business Meeting held April 1-3 in San Francisco. Dr. Good has served as vice president of NABSP for the past year. R. S. Saylor, executive vice president of the Indiana Blue Shield Plan and a member of the NABSP Executive Committee, was elected vice president. Other officers of the Association's Board of Directors re-elected at this meeting were: Russell B. Carson, MD, chairman; Carl R. Ackerman, MD, vice chairman; Ira C. Layton, MD, secretary, and William Sandow, Jr., treasurer.

*Dr. Arthur J. Offerman*, Omaha, Nebraska, President of Nebraska Blue Shield for the past 21 years is also a member of the Board of Directors of National Blue Shield representing practicing physicians on the board.

**Resolution—**

BE IT RESOLVED, That in the event of the law known as the "Social Security Amendments of 1965," that the Nebraska State Medical Association designate the Nebraska Medical Service (Blue Shield) as its



carrier for administration of benefits under the law.

This resolution was passed by the House of Delegates of Nebraska State Medical Association by a large majority on April 28, 1965.

### OPERATION GLEAN

(Continued from page 299)

differing ideas even though those ideas be basically alike. Should the bill, as it stands, become law the medical profession will be up to its neck in socialized medicine, but the rules and the regulations promulgated under the law can be more or less favorable to the doctors and hospitals as the Secretary of HEW sees fit. The law itself may be short, but the rules and regulations may fill volumes as is the case with the Veterans Administration.

Fragmentation of the medical profession has already begun. According to the *Lincoln Sunday Journal and Star* of May 9, 1965, The American Psychiatric Association has decided to take a position favoring "Medicare" and will go before the Senate Committee, on May 12, in support of this measure—diametrically opposed to the AMA. One might think there are those who yearn to be on the winning team!

What our House of Delegates did, after adequate study and discussion, was to pass, by a large majority, a resolution setting up our Policy Committee as the bargaining representative of the NSMA, and the Nebraska Medical Service (Blue Shield) as our fiduciary agent. The text of this resolution will, of course, be published in the Proceedings at an early date, hence will not be quoted here.

This resolution will place the NSMA in a position to act as a unit, to act promptly and as vigorously as occasion demands. We are not likely to resemble the man who ran outside, mounted his horse, and rode off in all directions. The men composing the Policy Committee and representing Blue Shield are, in the belief of this writer, experienced, loyal, and single-minded and will represent the vast majority of our members.

—George W. Covey, MD

## TUBERCULOSIS ABSTRACTS

### TETRAETHYL PYROPHOSPHATE POISONING FOLLOWING AIRPLANE DUSTING

Both humans and cattle had respiratory distress following TEPP dusting of crops during a thermal inversion in the State of Washington. The several factors involved are discussed.

Despite reports of human poisoning caused by drifting pesticides, scientifically acceptable evidence has not been published showing that the drift of the newer organic phosphorous insecticides has produced poisoning clearly recognizable.

The purpose of this paper is to report two outbreaks of poisoning which occurred in the state of Washington in 1963 following the dusting of two different crops with tetraethyl pyrophosphate (TEPP).

In the first instance, two planes of a commercial pesticide applicator alternately dusted 46 acres of a vineyard of hops near Toppenish, Wash., with 1 per cent TEPP dust in a manner similar to that used for the past 16 years.

A thermal inversion existed during the application so that the dust settled into the 20-foot-high hop vines. Some drifted at least 700 feet beyond the vineyard over adjacent pastures, corn, and other crops, and over houses. The dust hung in the air and drifted slowly away from the swathes being laid down by the planes flying and loading alternately. It did not lift for almost two hours.

While it is not unusual for insecticides to be applied by aircraft during a thermal inversion, it is unusual for an inversion to cause such still air for so long. The cloud of dust over one house was so dense that it was not visible approximately 300 yards away. Except for the prolonged thermal inversion, this application appeared to differ in no way from those of past years.

### TWO CATTLE DIE

The owner of one farm noted that the cattle began to cough so soon after the dust cloud settled over the pasture that there was not time for the cattle to have eaten TEPP dust on the grass. Two heifers, found down within 50 feet of his home, started convulsing and died within the second hour after onset. Some degree of cyanosis was noted in the tongues of other cattle. The cattle were observed to stagger when they moved and several fell briefly to their knees. The signs were consistent with both topical and systemic poisoning with TEPP.

The 8-year-old son of the farmer, playing on the lawn, became so short of breath he went into the house and complained to his mother.

Subsequent investigation in the area brought to 15 the number of people known to have had shortness of breath or tightness in chest. All but three had completely recovered before leaving the area or before arrival at the hospital. The three with residual shortness of breath were hospitalized overnight. No treatment was required for any.



The sheriff's office was advised to have all persons showing any effects taken to the local hospital. A total of 41 persons were examined in the emergency room in addition to five who were examined in the field.

### CLINICAL PICTURE

The clinical pattern of this type of poisoning has been seen frequently in occupationally exposed persons such as flaggers, pilots, loaders, and other workers breathing TEPP dust.

The people in this outbreak described their experience as follows: the first complaint was usually the sweetish smell (ethyl esters) of the TEPP followed by dryness of the throat (talc) with a bad taste. Coughing usually followed promptly but was sometimes the presenting sign. After breathing the dust-laden air for about 30 minutes, victims noted tightness in the throat or chest followed by shortness of breath.

These symptoms are the result of bronchiolar constriction probably caused by the direct action on the muscles of the bronchioles of the inspired TEPP dust or vapors. The fact that none developed pinpoint pupils suggests that most of the TEPP vaporized from the dust before it could reach the eyes. No one complained of visual difficulties except for dust.

Blood cholinesterase activities among eight tested remained essentially within normal limits.

A similar, smaller outbreak involving man and cattle occurred about two weeks later four miles north of Wenatchee, Wash. An orchard was dusted with TEPP under almost static air conditions that allowed the dust to remain in the area about two hours. A man and his wife and their heifer developed respiratory symptoms. The animal "foamed at the mouth" and breathed with difficulty. The symptoms in the people disappeared in about two hours.

Although the cattle may have been more heavily exposed than the humans, available facts do not explain why cattle developed systemic poisoning and the humans and other animals did not.

A possible explanation is the relatively lower blood cholinesterase activities of cattle. Their red cell cholinesterase levels normally average only about two thirds of man, and cattle plasma activities are almost absent. These differences might influence the buffering action of the blood in combining with absorbed TEPP. Furthermore, cattle tend to be excited by airplane application and in their heavier breathing may have inspired relatively more TEPP than humans.

### SEVERAL FACTORS

The absence of reports of outbreaks of this type of poisoning from drift of TEPP makes it unlikely that the cause has been any single factor. It appears more probable than an infrequent combination of several factors is required to trap dust-laden air in pockets for periods long enough to cause people in the area of drift to breathe enough TEPP to make them short of breath. These factors are (1) thermal inversion and consequent

static air conditions for longer than an hour over a considerable area; (2) topography of land causing interference with even, slow movement of dust-laden air; and (3) tall-growing crops with dense foliage constituting walls of vegetation located on such terrain.

Increased alertness on the part of industry, agriculture agencies, departments of public health, and the medical profession may be all that is required to prevent frequent or more serious recurrence of such episodes. Whenever clouds of TEPP dust tend to concentrate or remain static longer than usual, people should be urged to remove themselves and their cattle until the cloud has disappeared.

—Griffith E. Quinby, MD, MPH, and Glenn M. Doornink, MD,  
*Journal of the American Medical Association*, January 4, 1965.

**Technique of Renal Homotransplantation:  
Experience With 42 Cases — T. E. Starzl,  
et al (Department of Surgery, University  
of Colorado Medical Center, Denver), Arch  
Surg 89:87 (July) 1964.**

Technical factors are critical in renal homotransplantation. Minimization of homograft ischemia is essential. If the cooled kidney is revascularized within 40 minutes, urine flow occurs promptly. Longer periods of ischemia result in inconsistent function. Even at intervals less than 40 minutes there is an inverse correlation between ischemia time and quality of early function. Additional factors of importance involve site of placement of the graft, unkinked vascular channels, a method of ureteroneocystostomy permitting early removal of urethral catheters, avoidance of drains and bilateral nephrectomy, splenectomy, and homotransplantation in one stage. The methods used are described in detail. Postoperative complications, not unique to renal transplantation, occur more frequently than with other procedures. These include infections, gastrointestinal hemorrhage, diabetes mellitus, pancreatitis, thromboembolism, and neurological disorders. These complications appear to be related to immunosuppressive therapy, terminal uremia present at operation, splenectomy, and the use of pelvis veins.

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### NOTICE TO ALL CONTRIBUTORS

The deadline for items to appear in the following issue of the JOURNAL is the 10th of the month. The JOURNAL goes to press on the 12th.

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# Books



**"Milestones in Anesthesia — Readings in the Development of Surgical Anesthesia, 1665-1940"** by Frank Cole, MD. Published 30 May 1965 by The University of Nebraska Press, Lincoln, Nebraska. 290 pages (6" by 9"). Price \$6.50.

This unique collection is comprised of classic first-hand accounts of discoveries and advances in anesthesia beginning with a report on "A Way to Convey Liquor Immediately Into the Mass of Blood" (Christopher Wren) and ending with "The Use of Curare in General Anesthesia" (Griffith and Johnson). In addition to biographical notes on the fifty innovators whose contributions are described, Dr. Cole has provided a running commentary which links the various selections into a continuous narrative as well as putting each account in historical context.

This book should be a valuable source of information for all of us, but it should be particularly so for those who are entering the field of anesthesiology, that they may from the beginning understand the scientific background and the other factors which have influenced the relatively rapid development in this area.

The author, in addition to being an active, practicing anesthesiologist, is the newly-appointed editor of this journal.

**"Clinical Serology"** by Clois W. Bennett, MT. Published 15 October 64 by Charles C. Thomas, Springfield, Illinois. 270 pages (6" by 9"). Price \$8.00.

This is a book that will be useful for teaching purposes and will also serve as a guide and reference for clinicians and laboratory technologists. Chapter headings include the following:

- a. Basic principles of immunology and serology
- b. Syphilis serology
- c. Colloidal reactions
- d. C-reactive protein
- e. Cold Hemagglutination
- f. Streptococcus agglutination tests
- g. Agglutination tests for febrile diseases
- h. Serological tests for rheumatoid arthritis
- i. Tests for infectious mononucleosis
- j. Antibodies in thyroid disorders
- k. Tests used to diagnose influenza and lupus erythematosus
- l. The Weltmann serum coagulation reaction
- m. Serological tests for pregnancy

**"A Synopsis of Contemporary Psychiatry — 3rd edition"** by George A. Wett, MD and D. Wells Goodrich, MD. Published 15 April 1965 by The C. V. Mosby Company of St. Louis. 299 pages (5" by 8"). Price \$6.75.

Dr. Wett is Chairman of the Department of Psychiatry at the University of Missouri School of Medicine. He is also Director of the Division of Mental Diseases for the State of Missouri. Dr. Goodrich is Chief of the Child Research Branch of the National Institute of Mental Health at Bethesda, Maryland.

This handbook was written to fill the need for a brief, introductory text of psychiatry as a quick reference for psychiatric residents, medical and psychological interns, medical students, nurses, and others whose work in the psychiatric clinic and hospital may be for a brief period of time. It has been written also for the general practitioner who is having his attention increasingly directed to the psychological problems of his patients and who must, in view of the shortage of psychiatrists, often provide early care for those of his patients who develop mental illness.

**"Management of the Patient With Subnormal Vision"** by Gerald Fonda, MD. Published 15 April 1965 by The C. V. Mosby Company of St. Louis, Missouri. 161 pages (7" by 10") with 88 figures. Price \$11.00.

The author is an Associate Clinical Professor of Ophthalmology at The New York University School of Medicine. In this text, clinical and practical applications of optical and visual aids are emphasized. Chapter headings include the following:

- a. Blindness, residual vision, and eye diseases in relation to correction of subnormal vision
- b. Type and braille reading
- c. Visual aids
- d. Telescopic systems
- e. Contact lenses
- f. Binocular corrections for subnormal vision
- g. Training, instruction, and limitations of optical aids
- h. Theory of correction and foveal vision
- i. Ophthalmic equipment and visual acuity tests
- j. Procedure for examining patients with subnormal vision

**"Cellular Biology of Myxovirus Infections,"** a Ciba Foundation Symposium edited by G. E. W. Wolstenholme, FRCP, and Julie Knight, BA. Published in April 1965 by Little, Brown and Company of Boston. 368 pages (5½" by 8") with 85 illustrations. Price \$12.00.

Twenty-five eminent authorities and research workers from England, Czechoslovakia, United States, France, Australia, Germany, and Russia assembled in London in February, 1964 to present papers concerning, and to discuss, the myxoviruses. Although more work has been done on myxoviruses than on any other group of viruses, their anatomy



and physiology still remain a mystery in many respects. Presented here is a clear description of what is presently known of their construction, how they multiply and how their physiology is related to their role in nature.

Myxoviruses were defined (1955) as viruses 60 to 200 millimicrons in diameter, which adsorb to red cells, and give rise generally to respiratory infections. The members at that time were influenza A, B, and C, fowl plague, Newcastle disease and mumps. It is possible that such diseases as dog distemper, measles, rabies, rinderpest, and certain leukemias are also caused by this group of viruses.

### **Acute Leukemia Following Treatment of Hyperthyroidism With Radioactive Iodine —**

J. A. McBride (Post Graduate Medical School, London), *Brit Med J* 2:736 (Sept. 19) 1964.

This paper describes the occurrence of acute leukemia in a woman of 64 who was previously treated with radioactive iodine ( $^{131}\text{I}$ ) for hyperthyroidism. In all, the patient had five doses of  $^{131}\text{I}$  in a period of 18 months. Acute leukemia was diagnosed 21

months after the initial treatment with  $^{131}\text{I}$ . The literature on the occurrence of leukemia after therapeutic doses of radioactive iodine is briefly reviewed.

### **The Carcinoid Crisis — M. E. Kahil, II.**

Brown (Baylor University College of Medicine, Houston), and H. L. Fred, *Arch Intern Med* 114:26 (July) 1964.

A woman with the carcinoid syndrome in whom a bout of flushing was accompanied by profound hypotension and striking pruritus and hyperesthesias was seen. Levarterenol accentuated her symptoms and failed to produce a pressor response. Subsequently, the intravenous administration of an anti-serotonin compound (cyproheptadine) was followed by immediate subjective relief as well as by a return of the blood pressure to normal levels. The occurrence of peripheral vascular collapse as an occasional manifestation of the malignant carcinoid syndrome is emphasized, and its management is briefly discussed.

## **ORGANIZATIONS, NATIONAL**

### **American Academy of General Practice**

Mr. Mac F. Cahal  
Volker at Brookside  
Kansas City 12, Missouri

### **American Academy of Pediatrics**

E. H. Christopherson, Secy.  
1801 Hinman Ave.  
Evanston, Illinois

### **American College of Legal Medicine**

Glenn W. Bricker, M.D., F.C.L.M., Secretary  
1003-06 Medical Tower  
Philadelphia 3, Pennsylvania

### **American College of Obstetricians & Gynecologists**

Craig W. Muckle, M.D.  
1806 Garrett Road  
Lansdowne, Pa.

### **American College of Physicians**

Edward C. Rosenow, Jr., M.D., F.A.C.P., Secy.  
4200 Pine St.  
Philadelphia 4, Pennsylvania

### **American College of Radiology**

Mr. W. C. Stronach  
20 North Wacker Drive  
Chicago 6, Illinois

### **American College of Surgeons**

John P. North  
40 East Erie Street  
Chicago 11, Illinois

### **American Diabetes Association**

Laurentius O. Underdahl, M.D.  
1 East 45 Street  
New York 17, New York

### **American Heart Association**

Mr. Rome A. Betts, Secy.  
44 East 23rd Street  
New York 10, New York

### **American Hospital Association**

Edwin L. Crosby, M.D., Director  
840 Lake Shore Drive  
Chicago 11, Illinois

### **American Society of Anesthesiology**

Mr. J. W. Andes  
515 Busse Hy.  
Park Ridge, Illinois

### **American Society of Internal Medicine**

Mr. Albert V. Whitehall, Executive Secy.  
3410 Geary Boulevard  
San Francisco 18, California

### **The American Society of Clinical Pathologists**

Miss Eleanor F. Larson  
445 Lake Shore Drive  
Chicago 11, Illinois

### **American Medical Association**

F. J. L. Blasingame, Executive Vice Pres.  
535 North Dearborn Street  
Chicago 10, Illinois

### **Arthritis and Rheumatism Foundation**

Floyd B. Odlum, Chairman  
10 Columbus Circle  
New York 19, New York

### **International College of Surgeons**

John B. O'Donoghue, M.D.  
1516 North Lake Shore Drive  
Chicago 10, Illinois

### **National Multiple Sclerosis Society**

257 Park Avenue South, New York 10, N.Y.



## ORGANIZATIONS, STATE

**Alcoholics Anonymous**  
1345 N Street, Lincoln

**American Red Cross**  
W. J. Frenzel, State Representative  
2631 Garfield, Lincoln

**Cerebral Palsy Association of Nebraska**  
Mrs. Ben H. Cosdery  
201 South Elmwood Road, Omaha

**Creighton University School of Medicine**  
Richard Egan, Dean  
302 North 14th, Omaha, Nebraska

**International College of Surgeons**  
James J. O'Neil, M.D., Regent for Nebraska  
612 Medical Arts Building, Omaha 2, Nebraska

**Multiple Sclerosis Society**  
Mrs. Harold Stoehr, Executive Secretary  
3648 Folsom Street, Lincoln, Nebraska

**Muscular Dystrophy Society**  
Mrs. Marvin Traeger, President  
Fairbury, Nebraska

**National Foundation, Inc.**  
Clinton Belknap  
State House Station  
Post Office Box 4813, Lincoln, Nebraska

**Nebraska Chapter,  
Arthritis and Rheumatism Foundation**  
Lloyd E. Skinner, President  
Box 2, Elmwood Station, Omaha 6, Nebraska

**Nebraska Association of Pathologists**  
Dr. Robert A. Brooks, Secy.-Treas.  
1403 Sharp Building, Lincoln, Nebraska

**Nebraska Blue Cross-Blue Shield**  
Wm. H. Heavey, Executive Director  
518 Kilpatrick Building, Omaha, Nebraska

**Nebraska Chapter  
American Academy of General Practice**  
John A. Brown, M.D., Secy.  
402 Lincoln Liberty Life Bldg., Lincoln, Nebraska

**Nebraska Chapter  
American College of Physicians**  
Henry J. Lehnhoff, Jr., MD, Governor for Nebr.  
720 Doctors Building, Omaha, Nebraska 69131

**Nebraska Chapter  
American College of Surgeons**  
Robert W. Gillespie, MD, Secy.-Treas.  
500 South 17th St., Lincoln, Nebraska

**Nebraska Chapters  
National Cystic Fibrosis Research Foundation**  
Greater Omaha Chapter  
Capt. H. S. Glendenning, President  
1301 Offutt Boulevard, Bellevue, Nebraska

Lancaster County Chapter  
Mr. and Mrs. Gayle Voller, President  
530 No. 75th Street, Lincoln, Nebraska

**Nebraska Dental Association**  
D. W. Edwards, D.D.S., Secy.  
1220 Federal Securities Bldg., Lincoln, Nebraska

**Nebraska Diabetes Association**  
J. William Hervert, M.D., President  
Mr. Tom Skillman, Secretary  
7611 Lawndale Drive, Omaha, Nebraska

**Nebraska Dietetic Association**  
Barbara Holvick, President  
26th and Dewey, Omaha

**Nebraska Division American Cancer Society**  
Ray E. Achelpohl, Executive Director  
4201 Dodge, Omaha, Nebraska

**Nebraska Eye, Ear, Nose & Throat Society**  
G. T. Alliband, Secy.  
1020 Medical Arts Bldg., Omaha, Nebraska

**Nebraska Heart Association**  
Paul S. Archambault, Executive Director  
514 South 40th Street, Omaha 5, Nebraska

**Nebraska Hospital Association**  
Stuart Mount, Executive Director  
1335 "H" Street, Lincoln, Nebraska

**Nebr. Academy of Ophthalmology & Otolaryngology**  
C. Rex Latta, MD, Secretary  
710 Doctors Building, Omaha, Nebraska 68131

**Nebraska Pediatric Society**  
Otto G. Rath, Secretary  
3929 Harney, Omaha

**Nebraska Pharmaceutical Association**  
Miss Cora Mae Briggs, Executive Secretary  
1001 Anderson Building, Lincoln 8, Nebraska

**Nebraska Psychiatric Institute**  
602 South 44th Avenue, Omaha

**Nebraska Public Health Association**  
George R. Underwood, M.D., President  
935 "R" Street, Lincoln, Nebraska

**Nebraska Radiological Society**  
Jack Zastera, M.D., Secy.-Treas.  
816 Medical Arts Bldg., Omaha, Nebraska

**Nebraska Rheumatism Association**  
Vernon G. Ward, President  
Creighton University School of Medicine  
5 West 31st Street, Kearney, Nebraska

**Nebraska Society for Crippled Children**  
S. Orson Perkins, Director  
402 South 17th, Omaha, Nebraska

**Nebraska Society for Internal Medicine**  
Robert S. Long, M.D., President  
8721 Shamrock Road, Omaha, Nebraska

**Nebraska Society of Medical Technologists**  
Gladys Jeurink, MT, ASCP, 4600 Spruce, Lincoln

**Nebraska State Department of Health**  
E. A. Rogers, M.D., Director  
State Capitol Building, Lincoln, Nebraska

**Nebraska State Medical Association**  
Ken Neff, Executive Secy.  
1315 Sharp Building, Lincoln 8, Nebraska

**Nebraska State Nurses Association**  
Mrs. Zelda Nelson, Executive Director  
510 Securities Building, Omaha, Nebraska

**Nebraska State Obstetric and Gynecologic Society**  
W. Riley Kovar, M.D., Secretary-Treasurer  
3610 Dodge Street, Omaha 31

**Nebraska State Orthopedic Society**  
Harold Horn, MD, Secretary  
3145 "O" Street, Lincoln, Nebraska

**Nebraska State Pediatric Society**  
Otto Rath, M.D., Secretary-Treasurer  
3929 Harney, Omaha, Nebraska

**Nebraska Tuberculosis Association**  
Delmer Serafy, Executive Secy.  
406 W.O.W. Building, Omaha, Nebraska

**Nebraska Urological Association**  
Louis W. Gilbert, MD, Secretary-Treasurer  
903 Sharp Building, Lincoln 8, Nebraska

**Omaha Mid-West Clinical Society**  
1040 Medical Arts Building (68102)  
Rita M. Crowell, Executive Secretary

**POISON CONTROL CENTER**  
Children's Memorial Hospital  
502 South 44th, Omaha, Nebraska

**University of Nebraska College of Medicine**  
Cecil L. Wittson, MD, Dean  
42nd and Dewey, Omaha, Nebraska

(Please help us keep these addresses correct, by notifying the Editor of any changes).

## THE NEBRASKA STATE MEDICAL JOURNAL

### BEAUTIFUL NEBRASKA

Your Editor is a transplanted Nebraskan and, like adoptive parents and naturalized citizens, somewhat more appreciative of the pleasures of midwestern living and particularly of Nebraska's beauty than those who, through accident of birth, have always enjoyed these things, and may have come to take them for granted.

The picture that generally appears on the cover of the Journal is that of the state capitol, regarded by a former President of the United States as at least one of the most beautiful of state capitols. We depart from this on occasion throughout the year and depict other scenes showing what is typical of Nebraska and what is particularly beautiful.

This scenic departure displays Nebraska's Arbor Lodge. It is an especially good picture, we think, having dabbled in photography without attaining professional stature, but then one does not need to be a chicken to tell a good egg from a bad one. The scene should be familiar to Nebraskans generally.

It is a particularly pleasant combination of what is typical of and what is beautiful in Nebraska. And we hope you like it.

—F.C.

### THE THINGS WHICH ARE CAESAR'S

It goes without saying that doctors are trained and hospitals are built to care for the medical needs of the people in the community. It is perfectly obvious that the physician cannot do what the hospital does; a hospital is a physical plant, with a governing board, administrator, nurses, orderlies, maids, cooks, and technicians. The doctor practices medicine, and it is just as clear that this is what the hospital cannot possibly do.

The increased use by hospitals of full-time physicians can hardly escape our notice. Where hospitals with a full-time staff

are engaged in the practice of medicine for a fee, we do more than notice; we are concerned. We become non-independent technicians, we lose dignity and control, and the patient cannot possibly receive the fine medical care that is now being furnished.

If anesthesiology, pathology, physiatry, and radiology become included in the federal hospital bill, these specialists will suffer a loss of dignity and of incentive. The patients will suffer a loss of excellence in medical care. And those whose heads are not in the sand already see that other groups of physicians, specialists and non-specialists, will follow those of us who go first.

When Blue Cross was started, the medical specialties listed above were considered to be the practice of medicine, and benefits for these medical services were not included. Later, when Blue Shield began, it included benefits for anesthesiology, pathology, and radiology. Still later, in 1950, an attempt was made to include payment for medical services in the Blue Cross contract. When it did not meet with success, the Hospital-Professional Relations Committee of the Nebraska State Medical Association was called. The committee met and presented a resolution to Blue Cross, opposing the inclusion of these benefits in the Blue Cross contract, and they were not included. This is a healthy state of affairs. Is it only a matter of words that one insurance contract pays for doctors' services, rather than another?

The AMA Principles of Medical Ethics makes it very clear when it states what is the practice of medicine. Today, when the federal government and hospital groups force the issue almost beyond our control, when we are misrepresented and untruths are published for public consumption, and when many of those who favor government legislation do not understand it, it is well for us to realize what is happening and to speak out strongly, it is right for us to stand up and be counted, it is good for us to forget small differences and to close ranks, it is important for us to keep hos-



pital and medicine practice separate, like what is Caesar's and what is not, and to see how well this has been done in Nebraska.

—F.C.

## FREEDOM - UNITY

Freedom is not free, and we must continue to make sacrifices of our own time, energy, and convenience, if we are to preserve our freedoms as we have known them.

The future of medical care, as we know it today, will depend in large measure on the degree to which the medical profession is capable of exercising medical statesmanship, and promoting active leadership to provide constructive and practical answers to the changing social economic problems of our times. The future of medicine depends on the firm and fixed resolve by doctors to solve their own problems, keeping in mind that the public interest comes first.

Service benefits or "paid in full" benefits are a major attraction of Blue Shield in the eyes of the subscribing public, and constitute one of the chief factors in the fantastic growth of Blue Shield enrollment to 56 million people, 26.9 per cent of the population of the country, in the short span of 26 years. The middle income subscribing public is pleased with the Blue Shield Service Benefit contract, because it assures them that they can accurately budget their medical care costs, because the contract provides for service rather than cash.

We are now certain that Blue Shield is an appropriate fiscal arm for the medical profession. As a doctor in the active practice of medicine, I am sure that our future freedom in the practice of medicine is dependent upon our ability to balance off our ideals as we have learned them in our medical careers, against our own fiscal needs as practitioners, in a changing world. The medical profession in cooperation with its subscribers must maintain fiscal control over the Plans; if they fail to do this, then the economic control of American medicine will pass completely out of the hands of the medical profession. We will then lose the

privilege of expanding the contracts and disbursing a large percentage of the earned income of the Plans in the form of benefits for our subscribers.

The motivation and philosophy of Blue Shield has been to provide its subscribers with adequate coverage, at a price they can afford to pay; and the key word is adequate.

The social-medical-political problem involved in health insurance, as looked at from our viewpoint, is a continuing problem. It must have a continuing answer. The most effective tool, thus far, has been Blue Shield-Blue Cross. We must not abandon this effective tool unless we are ready to capitulate.

I make a plea for greater unity of thought and action in the medical profession of this country. Wearing ourselves out on each other is not only futile but fatal. Witness the frightening results in countries where disunity prevailed — for example in England.

If the doctors desire a fee-for-service, free choice doctor plan, and want it to compete successfully with other plans, they had better stand directly behind their own plan, control it, see that it meets the needs of the community.

Competition usually affords stimulation, often progress, but one does not compete against oneself. In the last analysis, we are all competing against government-run medicine, and we need united strength because the enemy is formidable. And, finally, if we are to attain our goals, we must chart our course by the fixed stars of community service, and not by the moving lights on the shores of materialistic expediency.

—Arthur J. Offerman, MD

## FROM APATHY TO AWARENESS

There is no index to thinking; as the years go by, we learn more of nature's secrets, but this is always accomplished by a small group, and it is more than possible that the human race thinks less as what is called civilization grows older. Something



like a century ago, when we read much and discussed more, determinism and freedom of the will were talked about at great length. There is a destiny that shapes our ends, Shakespeare said. Perhaps we are responsible for our fates and it may be that we are not. As laws change, violators are held less and less to account, while their misdeeds are ascribed to genetic or environmental defect for which they are not to blame. Still, there are things that we must do by ourselves and for ourselves. We must all of us one day lie down in darkness. And unfortunately too many of us must now, willy-nilly, go all the way from Apathy to Awareness.

Always a small handful of willful men, as Wilson put it, has fought our fight for us. While we, alone of all trades and professions, serve without recompense when those whom we serve cannot pay, a small number of us has incessantly worked for our independence and professional dignity. While too many of us were at Apathy, those who have served us without recognition or cooperation were at Awareness. It is late now and the trip may be futile, but it will be made. The dangers of socialized medicine, and of the inroads now being made by groups whom, though we had eyes, we did not see, were pointed out by those who were aware. Too many of us, though, were in the wrong place. At Apathy.

—F.C.

### HERE THERE BE TYGERS

The appearance of non-articles and non-books is an astonishing phenomenon and, while change is not always progress, one that is unwelcome. Non-books have become commonplace in nonmedical literature, where they appear as picture-books, books with blank pages or with pages that consist largely of wide margins, rambling autobiographies by unheard-of authors, old-joke books, and "as told to" books. A new development is the non-book or "instant book," which appears to be a symposium on a medical subject, but which on closer inspection turns out to be a collection of informal panel discussions conveniently re-

corded *en passant*. Often, each chapter is "written" by a different person, the printed material is merely conversation (often with little or no preparation), there is a great deal of duplication, as the index reveals; and in a discussion of single case, I have seen five or six experts give as may entirely differing opinions. The last fact alone leaves one with the distinct feeling that experts (and therefore the book) are of no help, and particularly, that the problem to which they refer is not actually a problem.

The non-article is the one that merely generalizes at great length and that finally says that one must "be careful in this case." Telling a doctor (or a non-doctor) to be careful, without telling him how to do it, is not telling him anything at all. And if we divide our cases into two groups and are told to be careful in one of them, it is of course the same thing as saying that we may (or even should) be less careful in the other. If being more careful makes us do our very best, then there is no reason why we ought not do our best in all cases.

"Here there be tygers" appeared on old maps where unexplored regions were shown, for reasons easily imagined. The phrase is an indication of fear of what is not known, but only supposed, and therefore is advice without reason. It told the traveler to be cautious there, but neither why nor how. "Be careful in this case" sounds suspiciously like the warning to beware of "tygers." It tells us to do our best, but are we not to do our best in the other cases, too?

—F.C.

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Your contribution to the AMA-ERF Student Loan Guarantee Fund multiplies 12½ times in generating education loan power for medical students, interns and residents. Give generously. AMA-ERF is located at 535 North Dearborn Street, Chicago 10, Illinois.

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DOCTOR — Does your wife like to read the Auxiliary news? Then be sure and take your copy home.

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# Comments from Your President

As President of your organization, I feel that all members are entitled to be aware of the concepts regarding Medicare (H.R. 6675) as reflected by Nebraska's Senators and Representatives in response to the resolution adopted by the House of Delegates of the Nebraska State Medical Association at its annual meeting.

—Willis D. Wright, MD

UNITED STATES SENATE  
Committee on the Judiciary

May 17, 1965

Dr. Willis D. Wright  
1315 Sharp Building  
Lincoln, Nebraska

Dear Dr. Wright:

It would appear on its face that the Douglas Amendment to include physician's services in pathology and radiology under the medicare bill is only the first of many similar moves which will be made with a view towards total socialization of medicine in the United States.

Through the years just such a process has been frequently warned of in debates against medical care bills. Each time there has been vehement denial by advocates of such plans that socialization was intended or that it would result.

You find me in sympathy and greatly interested in this phase of the pending legislation. You may be assured that the heaviest burden of proof and persuasion will have to be borne by Senator Douglas and the supporters of his amendment before my present convictions on the subject will be changed to favor it.

As you know, the hearings on the medicare bill are now in progress and will be extensive. Following their completion, the Finance Committee will then consider the bill in executive session where it will be carefully examined section by section. This type of attention was not given this revolu-



tionary legislation when it was considered by the House of Representatives.

Appreciate your having shared your views with me on this very vital subject.

Sincerely,  
Roman Hruska  
U. S. Senator, Nebraska

UNITED STATES SENATE  
Washington, D.C.

May 7, 1965

Willis D. Wright, MD  
President  
Nebraska State Medical Association  
1315 Sharp Building  
Lincoln, Nebraska 68508

Dear Dr. Wright:

Thank you very much for your letter of May 5, 1965 and for the resolutions which you enclosed therewith. I appreciate hearing from you.

I am certainly in agreement with your views concerning the inclusion of certain specialties in H.R. 6675 and am going to do the very best I can in the Finance Committee. Considerable strength is being built up on the opposition side, but we will see what we can do.

With highest personal regards and best wishes, I am

Sincerely yours,  
Carl T. Curtis, USS

CONGRESS OF THE UNITED STATES  
House of Representatives  
Washington, D.C. 20515

May 12, 1965

Mr. Kenneth Neff  
Executive Secretary  
Nebraska Medical Assoc.  
Lincoln, Nebraska

Dear Kenneth:

Thank you for your letter of the 10th and the two resolutions of the Nebraska State Medical Association.

You of course realize that this bill has passed the House and there is nothing further that I can do unless the bill is returned to the House. I am pleased that you brought the resolutions to my attention.

With every good wish, I am

Very sincerely,

Clair A. Callan

Member of Congress

CONGRESS OF THE UNITED STATES  
House of Representatives

May 17, 1965

Mr. Kenneth Neff,  
Executive Secretary  
Nebraska State Medical Association  
1315 Sharp Building  
Lincoln, Nebraska 68508

Dear Mr. Neff:

This will acknowledge and thank you for your letter transmitting the resolutions adopted by the House of Delegates of the Nebraska State Medical Association at its meeting on April 28.

I am glad to have the resolutions and your thoughtfulness in making them available to me is greatly appreciated.

Sincerely yours,

Glenn Cunningham

Member of Congress

CONGRESS OF THE UNITED STATES  
House of Representatives  
Washington, D.C.

12 May 1965

Mr. Kenneth Neff  
Executive Secretary  
Nebraska State Medical Association  
1315 Sharp Building  
Lincoln, Nebraska

Dear Mr. Neff:

This will acknowledge your letter of May 10th and the enclosed resolutions of the Nebraska State Medical Association.

As you know, I opposed H.R. 6675 and voted against it when it was on the Floor of the House. This bill has passed the House and is now being considered in the Senate.

I appreciate having these resolutions and knowing your views on this legislation.

With best regards, I am,

Yours sincerely,

Dave Martin

Member of Congress

UNITED STATES SENATE  
Committee on Finance

May 12, 1965

Mr. Kenneth Neff  
Executive Secretary  
Nebraska State Medical Association  
1315 Sharp Building  
Lincoln, Nebraska 68508

Dear Mr. Neff:

Permit me to acknowledge your letter of May 10, submitting copies of resolutions passed unanimously by the House of Delegates of the Nebraska State Medical Association concerning H.R. 6675, the Social Security Amendments of 1965.

I appreciate having this expression of your Association's views. In order that they may be known to all interested in this legislation, I am taking the liberty of placing your resolutions in the printed record of the hearings now in progress.

With kindest regards, I am

Cordially yours,

Harry F. Byrd

Chairman



THE DIAGNOSIS *and* MANAGEMENT of

# Chronic Obstructive Bronchopulmonary Disease\*

**M**UCH has appeared in the literature on the definition of emphysema and chronic bronchitis, with speculation as to the causes of both conditions.<sup>1-4</sup> Since too many facts remain obscure concerning the nature of both diseases, precise definitions should be avoided, and both conditions should be classified under chronic obstructive bronchopulmonary disease.

There is a close relationship between chronic bronchitis and emphysema on purely morphologic grounds.<sup>5</sup> Chronic bronchitis is a chronic, diffuse, inflammatory disease of the bronchial tree; it is manifested by chronic cough and production of sputum and usually is associated with a history of repeated infections of the upper part of the respiratory tract. Emphysema is a chronic lung condition characterized by an increase beyond normal size of the air spaces distal to the terminal bronchioles, with destruction of their walls; it is manifested by unusual breathlessness. Chronic bronchitis and chronic obstructive emphysema are commonly found together, but it is important to realize that they may exist separately.

## Diagnosis

More attention should be directed toward identifying the distinguishing features of the diseases and determining how much of the problem is bronchial and how much is due to destroyed parenchyma. The bronchial component has a high degree of reversibility while the destructive alveolar disease is irreversible.

The history may be helpful. Patients with chronic bronchitis have a history of chronic cough, production of sputum, and repeated upper respiratory infections of 10 to 20 years' duration. Dyspnea is a later manifestation. Chronic bronchitis causes fre-

quent thoracic infections during winter, which often necessitate hospitalization. There is usually a productive cough associated with cigarette smoking. In contrast, patients with emphysema have symptoms of much shorter duration. These patients usually are heavy smokers. Dyspnea develops early and becomes disabling over a period of 3 to 5 years. Cough and production of sputum are late manifestations. Attacks of severe dyspnea occur frequently and there is progressive deterioration.

Physical examination may be helpful. Chronic diffuse obstructive pulmonary emphysema is diagnosed by detection of expiratory slowing on auscultation. The breath sounds are decreased; the diaphragm is depressed and moves poorly. Patients with emphysema lose weight. Congestive failure develops, usually as a terminal event. In chronic bronchitis the breath sounds may be diminished. Basilar rales, sonorous rhonchi, and wheezes are more likely to be noted. Breathing is more harsh. There is little weight loss. These patients are more likely to be hypoxic and polycythemic, and pulmonary hypertension is more likely to develop. They may have repeated episodes of congestive failure.

## Treatment

The results of treatment in both conditions are dependent on the reversibility of the disease at the time the patient first seeks medical care. I have listed the important aspects of treatment in outline form.

\*Read at the meeting of the Nebraska State Medical Association, Omaha, Nebraska, April 27, 1965.

## 1. Education of the patient

- a. Abstinence from smoking
- b. Breathing exercises to be carried out for 10 minutes three times a day
- c. Instructions for maintaining dust-free conditions and adequate humidity at home
- d. Use of cold-weather mask during winter months
- e. Avoidance of bronchial irritants (fumes, odors, dust)
- f. Control of excessive or harsh coughing

## 2. Drugs

- a. Aerosol bronchodilator (patient should be instructed in its use): isoproterenol (Isuprel) hydrochloride, 1:200, in a DeVilbiss 40 nebulizer, used three times each day; nebulizer is charged with 10 drops of distilled H<sub>2</sub>O plus 10 drops of isoproterenol.
- b. Systemic bronchodilator: taken orally 1 hour after each use of the nebulizer and at bedtime (suitable agents include Quadrinal, Tedral, Amodrine, Choledyl, Mudrane, Mudrane GG, Brondecon, Bronkotabs, Quibron, and a mixture of Orthoxine and aminophylline)
- c. Expectorants: Saturated solution of potassium iodide, 10 drops three times a day; patients who are unable to tolerate potassium iodide can be given glycerol guaiacolate, 100 mg three times a day, either alone or in combination with a bronchodilator (Quibron or Mudrane GG); patients receiving fluids intravenously can be given sodium iodide, 1.0 gm/liter in the intravenous fluid
- d. Broad-spectrum antibiotic: tetracycline taken orally, 250 mg four times a day for 5 days, whenever there is upper respiratory infection or discolored sputum; *Haemophilus influenzae* and *Diplo-*

*coccus pneumoniae* are the organisms most commonly found in the sputum<sup>6</sup>

## 3. Other measures

- a. Adequate fluid intake to maintain good hydration of the bronchial mucosa and to keep secretions loose
- b. Patients with a normal arterial oxygen saturation should be encouraged to walk on level surfaces. Exercise training is of value in promoting a sense of well being as well as greater physical independence.<sup>7,8</sup> An oxygen-equipped walker-support can be used by many emphysematous patients to increase their strength and exercise tolerance on a slowly progressive basis.
- c. An emphysema belt or abdominal support should be worn by patients with a pendulous abdomen.
- d. Low-sodium diet (2.0-gm), digitalis, and thiazide diuretics should be prescribed for patients with cor pulmonale and congestive failure. Particular attention should be paid to the possibility of hypokalemia. Patients with cor pulmonale are particularly susceptible to hypokalemia.<sup>9</sup>

## Discussion

Many patients can be treated successfully according to this program without tracheostomy and artificial ventilation. Aminophylline administered by slow intravenous drip is an excellent respiratory stimulant as well as a bronchodilator.

Isoproterenol can be administered by intermittent positive pressure breathing (IPPB) using a heated aerosol for increased humidity. In some cases, tracheostomy can be avoided by giving the patient a mixture of 40% oxygen and 60% helium by IPPB. The helium, which is very diffusible, carries the oxygen and bronchodilators into the poorly ventilated alveoli.

In some cases, tracheostomy still may be

necessary to provide more adequate removal of secretions by suction, to eliminate more dead space, and to use the IPPB machine for artificial ventilation of the patient. It should be remembered that too rapid correction of chronic hypercapnia can result in convulsions.<sup>10</sup>

Phlebotomy for polycythemia is an important part of the treatment. Blood should be removed in small increments, of no more than 250 ml at a time. There is a high incidence of thromboembolic disease among patients with long-standing pulmonary insufficiency.<sup>11</sup> Right ventricular failure, polycythemia, and prolonged immobilization are the factors predisposing emphysematous patients to pulmonary embolism and thrombosis.

### Summary

I have attempted to review the important points in the diagnosis and management of patients with chronic obstructive bronchopulmonary disease. It is important that we become more vigorous in our treatment and rehabilitation programs.

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"Doctors' strikes in the so-called 'advanced nations' are just one more sign of the uphill struggle that our own system of medicine faces to preserve its freedom and identity. Unfortunately, American physicians are not sufficiently active when it comes to opposing attempts by Washington to regulate and control the practice of medicine. In this way, the U. S. doctor constitutes the biggest threat to his own future security and welfare. The warnings from abroad have never been clearer." (WMA Newsletter No. 43, April 1964).



# "The Battle of The Experts:"

## A NEW APPROACH TO AN OLD PROBLEM IN MEDICAL TESTIMONY

(Second of Three Installments)

### IV. THE HISTORY AND RESULTS OF AMERICAN MEDICAL TESTIMONY PLANS — THE CASE FOR THE COURT-APPOINTED EXPERT SYSTEM

LARRY W. MYERS\*  
Omaha, Nebraska

#### A. Non-Judicial Medical Testimony Plans

The Minnesota Plan is essentially a policing technique.<sup>76</sup> Since 1940 it has been a cooperative effort by the Minnesota State Medical and Bar Associations. The Medical Association maintains a Committee on Medical Testimony to review reports and testimony of medical witnesses. Whenever a judge, hearing officer, attorney or physician suspects medical testimony as false or so clearly wrong as to reflect incompetence or undue partisanship, he may write a letter to the Medical Society. The Committee reviews the transcript and various specialists express opinions on the testimony in question. If the charges are substantiated, the Committee either sends a private reprimand to the physician or in more serious cases refers the matter to the State Board of Medical Examiners. The Board may suspend or revoke a doctor's license.

The Plan's effectiveness in its earlier years was definite and marked. From 1940 to 1956 the Committee investigated 34 cases, censured witnesses in 17 cases and referred 10 cases to the Board of Examiners. The Board disciplined in only one case. Few cases have been reported in recent years and only one case presently pends before the Committee.<sup>77</sup>

The Minnesota Plan warrants praise by making doctors strictly accountable to their medical peers. The risk of discipline undoubtedly restrains exaggeration in medical testimony, but its influence is limited because members of neither profession are anxious to come forward and brand their fellow practitioner as unethical.<sup>78</sup> Also, the plan is only curative, not preventive. Post-

litigation discipline is little consolation to the party harmed by the testimony.

On a lesser scale the plan spread to the Illinois Medical Societies where it apparently "died a natural death,"<sup>79</sup> the Harris County (Texas) Medical Society and the States of Washington and Kansas.<sup>80</sup>

#### B. Court-Appointed Expert Systems

The idea of the court-appointed expert originated in Roman Law which considered a physician more an *amicus curiae* or "friend of the court" than as a witness. "*Medici proprie non sunt testes, sed est magis iudicium quam testimonium*" was Baldus' gloss on the Code Justinian.<sup>81</sup> It developed in the Civil Law countries of Europe where the expert is part of the judicial system. He is an officer of the court and approaches medical testimony with a judicial mind, rather than as a zealous advocate.<sup>82</sup> The right of a common law court to call in witnesses on its own initiative was seen to arise from the inherent judicial power to do all possible to obtain material relevant to an enlightened judgment. Dean Wigmore describes the source of this right:

But the general judicial power itself, expressly allotted in every constitution, implies inherently a power to investigate as auxiliary to the power to decide; and the power to investigate implies necessarily a power to summon and to question witnesses . . . The trial judge then may call a witness not called by the parties, or may consult any source of information on topics subject to judicial notice.<sup>83</sup>

\*B.A., 1962; J.D., 1964, University of Nebraska. Member of Nebraska and American Bar Associations. Presently studying for LL.M. at University of Michigan.

Since the turn of the century American commentators and various organized groups have promoted programs to utilize experts appointed by the court.<sup>84</sup> The programs have been designed only for cases where findings by neutral experts would enhance opportunity for clarity of issues and a just decision. As an inchoate concept the first plans were applied only to specialized areas of the legal process wherein expert testimony was the key to the outcome of the dispute.<sup>85</sup> More recently the idea has been incorporated into judicially-administered plans affecting personal injury disputes.

(1) *The Model Expert Testimony Act as adopted in South Dakota.* In 1939 South Dakota adopted the proposal of the National Conference of Commissioners on Uniform State Laws.<sup>86</sup> The plan provides for expert witnesses in all phases of specialized training. Court appointment of up to three experts may be made by the judge on his own motion or upon request after consultation with both parties in both civil and criminal cases. Parties share equally in the expense and both may call their own expert witnesses and cross-examine the court-appointed expert.

This state-wide plan is not often requested by counsel. Nor is it frequently utilized by the Circuit Court Judiciary though most judges report having used it several times in either criminal, accounting or personal injury disputes.<sup>87</sup> All judges concur that the plan is desirable and serves a useful purpose. The fact that the court has the power to call experts psychologically has a salutary effect on experts who are called by the parties. A Circuit Judge expresses the real benefit of the plan:

The provision of the statute permitting court-appointed experts is a very good one although it is seldom used. It has a wholesome effect upon other experts who are called to testify as they are aware of the fact that the court has the power to call a disinterested expert or experts. That knowledge will keep them from coloring their opinions too much.<sup>88</sup>

(2) *Advisory Panels in Non-Jury Compensation Proceedings.*<sup>89</sup>

(a) *The Advisory Panel to the Nebraska Workmen's Compensation Court*

A Medical Advisory Board to the Nebraska Workmen's Compensation Court existed until the early 1940's. The local court rule arose out of general statutory provisions empowering the court to adopt all reasonable rules to carry out the intent and purpose of the Act.<sup>90</sup> The legislature thus granted the Compensation Court express approval to dispense with the common law and statutory rules of evidence. The court could "... upon its own motion require production of ... any facts or matters which may be necessary to assist in the determination of the rights of the parties."<sup>91</sup> The panel of doctors enabled the Court to investigate in such a manner as in its best judgment was best calculated to ascertain the substantial rights of the parties.<sup>92</sup>

The Board rendered an important service in informing the Court on difficult medical problems,<sup>93</sup> but during the early 1940s it was discontinued. Nebraska attorneys who practiced at the time now advance conflicting theories to explain the Board's disuse,<sup>94</sup> and several recommend revival of the plan. Presiding Judge Albert Arms reveals the real reason behind the panel's termination:

While we realize that such panels may be of some value in the larger cities in jury cases, our experience has led us to the conclusion that such panels would not be practical in Nebraska in compensation cases ... A judge of this Court after several years experience in hearing cases soon learns those doctors who go overboard conservatively in favor of the defendant and those doctors who are overly liberal in favor of their patients. We learn to give the doctor's testimony weight to which it is entitled, and generally speaking, we find that a specialist in a particular field will be entitled to more credit than a general practitioner, who is quite often the employee's family physician<sup>95</sup>

A fair reading of this explanation indicates that the panel was abolished not because it was undesirable but merely because it was no longer considered necessary. Several years experience enables the judiciary to properly evaluate biased medical testimony. Only a gradual learning process furnishes such discernment.

However Judge Arms further explains:

This court does have the authority to appoint a doctor. We often do so in those disputed cases where there is a wide variance in the



testimony of doctors which renders it almost impossible in some cases for the court to make an intelligent finding.<sup>96</sup>

Despite its extensive experience in resolving medical testimony disputes, the Court often must resort to court-appointed experts. *A fortiori*—conflicting testimony in many cases will perplex a jury without providing a similar aid to alleviate its uncertainty. The jury must sift for itself the generally highly technical medical testimony and reach its conclusion *pretty much* on its own responsibility. Strong precedent indicates that a court-appointed panel would facilitate a jury's resolution of medical disputes.

#### (b) *The Utah Plan*

In 1941 the Utah State Medical Association and the Industrial Commission collaborated to provide a panel to resolve medical issues in all occupational disease cases, especially silicosis. In 1955 its provisions were extended to workmen's compensation proceedings.<sup>97</sup> The Industrial Commission pays for the services of the panel of three and any costs incident to examination. Finances stem from deposits from employers of workers who are killed in their work and who leave no dependents. This fund has not been materially reduced although the Commission has in some cases engaged experts from outside the state and even outside the United States.

The panel's findings are influential but not conclusive. If objections are filed to the panel report, the Commission is required to hold a hearing so the objector may produce rebuttal medical testimony. This seldom occurs, and the medical examinations have aided in settlement of every case in which they have been used. Labor, industry, insurance carriers and the Commission strongly favor the program.<sup>98</sup>

#### (3) *Panels Appointed by Medical Societies for Judicial Use in Jury Proceedings*

##### (a) *The New York Plan*

The New York Plan became operative in 1952 in New York County and two years later in Bronx County.<sup>99</sup> It was originally conceived by the New York Trial justices under the leadership of leading judges, pro-

fessors and medical men.<sup>100</sup> The basic approach empowers the court to call a neutral expert from a list nominated by the local medical society. The expert examines the plaintiff and the medical reports of both parties and then reports his findings at pre-trial hearing, if necessary, at the trial.

The choice of doctors to serve on the panels is entrusted solely to the medical profession itself. A Special Joint Committee of the New York Academy of Medicine and the New York County Medical Society chooses the doctors according to two specified requirements — acknowledged authority in the branch of medicine involved and no previous identification with defendants or plaintiffs in personal injury litigation.<sup>101</sup> The Committee listed 18 different panels and persuaded those chosen to serve.<sup>102</sup>

The judiciary alone select the cases for reference to the panel. During pre-trial conference if the medical reports from both parties differ widely in their analysis of the injuries, the judge may think a report by an impartial expert would help in resolving the variances. The judge then contacts The Medical Report Office by means of a reference form describing the nature of the medical dispute and the type of specialist needed. The judge and the attorneys know only which specialties are available, but not the names of the members. The clerk's files are confidential and organized on a rotating basis to prevent prediction of which name will next appear.

The attorneys then arrange with the clerk at the Medical Report Office to have a panel doctor examine the plaintiff. The parties must accept the first doctor on the list unless he has been a participant in the treatment of the particular litigant. The parties then give their reports to the clerk who is allowed to subpoena hospital records. The expert's examination report in each case is sent in triplicate to the Medical Report Office to be distributed among the judge and the lawyers.

At a subsequent pre-trial conference the judge and attorneys then discuss the case again in light of the new report. If settlement is not reached, either party or the judge may call the panel expert to testify.



The judge discloses the nature of the expert's court-appointment, and either party may cross-examine him.

The Sloan and Ford Foundations financed the procedure during its initial two years. All subsequent fees of panel experts for examination and for court appearances became a regular part of the County budget. New York County annually appropriates \$15,000. The panel experts are requested to make the same charge for services as they would to a private patient of moderate means.<sup>103</sup>

Most commentators proclaim the results of the New York Plan as successful.<sup>104</sup> In 1956 a Special Committee of the New York City Bar Association released the following report on the accomplishments of the plan:

1. The Project has improved the process of finding medical facts in litigated cases.
2. It has helped to relieve court congestion.
3. It has had a wholesome prophylactic effect upon the formulation and presentation of medical testimony in court.
4. It has proved that the modest expenditure involved effects a large saving and economy in court operations.
5. It has pointed the way to better diagnosis in the field of traumatic medicine. Unlike the others listed above, this accomplishment is an unexpected dividend, which was not in contemplation when the Project was initiated.

In addition, the Project has provided an excellent, but all too rare, example of successful interprofessional cooperation. Doctors and lawyers, instead of bickering fruitlessly or merely talking about the need for cooperation, have worked together effectively in solving a common problem. And judges, instead of holding themselves aloof, have participated fully in the enterprise. The result has been better understanding among judges, lawyers and doctors, and mutual help. It is not too much to expect that the long-range effect will be increased public respect for both professions and increased public confidence in the administration of justice.<sup>105</sup>

The results over the last decade corroborate this earlier report. The most recent comprehensive tabulation mirrors the New York experience over the eleven and one-half years ended June 30, 1964.<sup>106</sup>

Judge Gold of the First Department indicated that the use of the panel reached the salutary result of settlement in about 70 per cent of the cases in which it was used.<sup>107</sup>

TABLE A

| Item                                          | New York County | Bronx County | Total |
|-----------------------------------------------|-----------------|--------------|-------|
| 1. Case Referrals to Date                     | 828             | 579          | 1407  |
| Preference Referrals to Date                  | 44              | 95           | 130   |
|                                               | 872             | 674          | 1546  |
| 2. Resumed Conferences                        |                 |              |       |
| Pending                                       | 18              | 5            | 23    |
| 3. Cases Passed Upon at Resumed Conferences   | 699             | 405          | 1104  |
| 4. Cases Settled                              | 595             | 422          | 1017  |
| 5. Transferred to Lower Court                 | 17              | 10           | 27    |
| 6. Cases Tried                                | 162             | 101          | 263   |
| 7. Cases in Which Examinations Were Held      | 836             | 641          | 1477  |
| 8. Cases in Which Examinations Are to be Held | 3               | 13           | 16    |
| 9. Cases Disposed of Without Examinations     | 33              | 20           | 53    |

TABLE B

(References to the Medical Office, January 1, 1964 to June 30, 1964).

|                |    |    |     |
|----------------|----|----|-----|
| 1. Pre-Trial   | 25 | 12 | 37  |
| 2. Trial Term  | 16 | 41 | 57  |
| 3. Preferences | 0  | 10 | 10  |
| 4. Others      | 1  | 1  | 2   |
| Totals         | 46 | 64 | 106 |

TABLE C

(References to Specialists on the Panel, January 1, 1964 to June 30, 1964. Cases are sometimes required to go to more than one specialist).

|                           |    |    |     |
|---------------------------|----|----|-----|
| General Surgery           | 0  | 0  | 0   |
| Plastic Surgery           | 0  | 0  | 0   |
| Ophthalmology             | 4  | 3  | 7   |
| Cardio-Vascular           | 2  | 5  | 8   |
| Dermatology               | 0  | 0  | 0   |
| Tuberculosis              | 0  | 1  | 1   |
| Internal Medicine         | 0  | 0  | 0   |
| Neurosurgery              | 10 | 6  | 16  |
| Neurology                 | 1  | 3  | 4   |
| Psychiatry                | 0  | 0  | 0   |
| Neuropsychiatry           | 5  | 4  | 9   |
| Roentgenology             | 1  | 3  | 4   |
| Orthopedics               | 12 | 32 | 43  |
| Otolaryngology            | 3  | 3  | 6   |
| Genito-Urinary            | 1  | 0  | 1   |
| Obstetrics and Gynecology | 0  | 1  | 1   |
| Endocrinology             | 0  | 0  | 0   |
| Allergy                   | 1  | 0  | 1   |
| General Dentistry         | 1  | 1  | 1   |
| Tropical Medicine         | 0  | 0  | 0   |
| Totals                    | 40 | 62 | 102 |

It is true that the percentage of the cases referred to the medical office and ultimately tried to verdict is higher than is the percentage of all cases filed that go to verdict (usually between 7 and 10 per cent), but the comparison does not detract from the validity of the settlement figures in cases that are referred. It must be remembered that these are the "hard core," the most resistant to settlement, and the most persistent of all the cases on the calendar. When this fact is considered, the percentage which went to trial is remarkably low.

The public finance of the Project has saved more than it has cost. The Special Report originally estimated savings of \$2250 for each trial; settlements saved more than 10 times the total amount spent for fees.<sup>108</sup> These figures neither take into account trial days saved through settlements during trial nor public savings effected through cutting down excessive claims against the City of New York, one of the major litigants in the court. The Justices and the appropriating authorities still report that, assuming very conservatively, cases settled would each take three trial days, the Project saves substantially more than its cost.<sup>109</sup>

One very important feature of the plan is the provision of the rule which permits, but does not require, the trial justice or either party to call upon the medical expert to testify at the trial. This serves three primary ends. First, it provides for the judge and jury an impartial, highly expert and informed factual basis for the formulation of final judgment on the extent of damages, thus aiding them to some extent in the difficult, technical job of reconciling conflicting expert opinions given by the partisan doctors for the opposing parties. Secondly, the very existence of the right, even though it is not exercised, has been responsible for many intangible and statistically immeasurable benefits. It serves to restrain certain partisan experts from expressing their reports, or at the trial, extreme and misleading findings, which they know or think can be publicly exposed on the witness stand by a highly respected member of the medical profession. Finally, the procedure is an intangible force for pre-trial

settlement of the case. The plaintiff with an inflated claim or the defendant who denies all or any substantial damage when it clearly exists to some degree, will be more truthful and reasonable at pre-trial if he has in his hands a neutral report on the injuries by a highly respected practitioner chosen by the court on recommendation of responsible leaders of the medical profession, who, he knows, will testify at the trial. If this were not the understanding at pre-trial, the value of the impartial expert would be greatly reduced.<sup>110</sup>

Based on this experience it is the recent consensus among the judges of the First Department that it would be in the interest of justice to extend a similar rule for those counties in New York where such a medical panel is feasible.<sup>111</sup> The basic idea of the New York Plan has spread to several other jurisdictions during the last decade.<sup>112</sup>

#### (b) *The Baltimore Plan*<sup>113</sup>

Baltimore adopted an analagous plan in 1955 under the aegis of Emory H. Niles, Chief Judge of the Supreme Bench of Baltimore. Four distinct differences contrast it to the New York Plan. First, the names of the doctors in the twenty-one panels (each panel consisting of three doctors) are not kept secret, though they are not published. Secondly, the plan is set in motion only upon party request. Third, a party's objection to any doctor named may motivate the judge, in his discretion, to eliminate the doctor and to appoint another. Finally, the cost is not borne by the public but usually by the litigant calling the expert witness. The final word is left to the discretion of the judge. To encourage impartiality the witness is not told which party is responsible for his appearance.

Initially, the plan was not extensively utilized. It is weakened because the appointment of the impartial expert is dependent upon request by one of the litigants. The plan also depends entirely upon the judge's discretion. Some of the judges have never used it. During the last few years its employment has been advantageous in aiding the medical fact-finding process, though its use has not increased substantially.<sup>114</sup>



(c) *The Philadelphia Plan*<sup>115</sup>

Through cooperation of the judges of the U. S. District Court and the Medical Society of the State of Pennsylvania,<sup>116</sup> the "Philadelphia Federal" Plan became operative in 1958. Two features differ from the New York Plan. First, if there is objection to the first expert on the panel list, the doctor following him may be offered as an alternative. If counsel will not agree on the second expert, the Judge then designates one of the two. Secondly, the doctor's fee is paid equally by the parties.<sup>117</sup>

A report for the period ending September 8, 1964, regarding the one hundred and eleven cases where applications have been made reveal propitious results:<sup>118</sup>

|                                                                                                                                                                                                            |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1. Motion for appointment of doctor denied .....                                                                                                                                                           | 9  |
| 2. Settled prior to appointment from the panel (motion denied in 6 due to delay in filing and the imminence of trial and the cases were settled subsequently)....                                          | 13 |
| 3. Case tried to verdict. (In 15 of these the verdict was consistent with the report of the neutral doctor. In the other 9, the jury's verdict was not consistent with the neutral doctor's report). ..... | 24 |
| 4. Case submitted to jury. (In 2 the jury could not agree, and in other 2 cases were settled during trial and juries were withdrawn). .....                                                                | 4  |
| 5. Case tried to verdict on the issue of damages (17 plaintiff verdicts and 5 defendant verdicts). .....                                                                                                   | 22 |
| 6. Settlement reached after receipt of doctor's report (45 did not go to trial, 8 settled during trial) .....                                                                                              | 53 |
| 7. Examination suggested by Court rather than on motion by either party). .....                                                                                                                            | 4  |
| 8. Miscellaneous .....                                                                                                                                                                                     | 4  |
| 9. Reports received and settlement discussions pending. ....                                                                                                                                               | 2  |

Though the effect on court congestion has been negligible, the plan has had a beneficial effect on medical fact finding, medical testimony and promotion of better understanding among the professions.<sup>119</sup>

(d) *The Chicago Plan*<sup>120</sup>

The U. S. District Court Judges in the Northern District of Illinois adopted a plan in 1959 virtually identical to the "Philadelphia Federal" Plan. The sole distinction is

that the judge decides whether payment is to be made by either or both parties.

It is especially significant to note that the Illinois Supreme Court adopted the rule in 1961 providing for court-appointment of medical experts in the State Courts. The Illinois State Medical Society is cooperating by establishing panels of experts to serve those courts by reviewing the membership yearly and inquiring diligently into the quality of the examinations, reports and testimony of the panel members. In 1962 the State Medical Society, which terms Impartial Medical Testimony "an important public service," put up \$5000 of its own funds toward the payment of panel members and now intends to appropriate another \$5000.<sup>121</sup>

The plan was utilized 67 times during its first two years and 18 times in the past year, 1964.<sup>122</sup> The Illinois State Medical Society is now collecting data, and indications are that their report will prove the plan is serving a useful purpose. The judges are unanimous in their enthusiasm for it.

(e) *The Los Angeles Plan*<sup>123</sup>

This plan gives wide latitude to judicial discretion. First, the judge or either party may request examination by the neutral expert, but final decision in the matter is left to the judge. Secondly, if counsel for either party objects to the assignment of the expert, he is passed over and subsequent panel experts are considered until agreement is reached. At the trial the judge again has discretion in allowing the expert to be called by the party originally requesting him. The plan originally prohibited the expert's court-appointment from being disclosed to the jury unless counsel attempted "to impeach him by showing bias or prejudice." The rule was changed to disclose his court-appointment in all cases, and he may be cross-examined by both sides or by the judge. Finally, the litigant originally requesting appointment pays all fees unless the judge determines that the litigant is unable to pay in which case County finance is used. The fee charged by the expert must conform to the scale established by the California Industrial Accident Commission.<sup>124</sup>



Originally the plan contained a unique and rather limiting feature in that every case involving requests for the court-appointed expert had to be transferred to the Chief Judge for handling. This apparently is no longer the rule. The plan is credited with having stimulated settlement of numerous cases as a result of Judges merely indicating to the parties that impartial examinations appeared to be needed. Judge Reginald I. Boudier states that, during the first two years, not a single case involving appointment went to trial.<sup>125</sup> Presiding Judge Kenneth N. Chantry reports that the plan is currently receiving extensive use though no statistics are available.<sup>126</sup>

(f) *The Cleveland Plan*<sup>127</sup>

Under this plan adopted in 1959 the judge invokes the panel only if the parties so agree. A panel of three experts conducts examination at request of the pre-trial judge, and compensation is based upon a fee schedule established by the Academy of Medicine with court approval. A unique feature requires the parties' written stipulation that if the case is tried neither will mention the fact of participation by court-appointed experts during pre-trial. This is the only operating plan forbidding identification of the court-appointed expert if he is called to testify.

Results bear out the weakness of the plan. More than a year after operation commenced only four orders of the court had been issued.<sup>128</sup> The plan is now a controversial issue among the lawyers and doctors in Cleveland. No requests for court-appointed experts have been made in over a year, and the plan has apparently fallen into desuetude.<sup>129</sup> The first reaction for its weakness is its restriction to pre-trial use in its refusal to identify panel members as such to the trial jury. Also the use of three independent examinations is cumbersome as is the requirement that counsel for both parties consent to the use of the plan.

(g) *The Pittsburgh Plan*<sup>130</sup>

Since 1962 a plan virtually identical to the "Philadelphia Federal" plan has operated in both the federal and state courts in the

Pittsburgh area. It was activated after intensive search by the Medical-Legal Committee of the Allegheny County Medical Society. In over two years of operation twenty-eight cases have been referred to the Medical Society's panel. Though no further statistics have as yet been compiled, recent reports indicate that the doctors have been most cooperative in serving on the panels and the courts are well satisfied with its administration in promoting settlements.<sup>131</sup>

In summary, several observations are evident upon close examination of the court-appointed expert plans.<sup>132</sup> First, the plans are used in a relative small number of the total cases processed by a court. However, they are applied to those "hard core" cases which otherwise offer the least hope of settlement. These are the cases whose trials consume much of the time and resources of the courts.

All cases in which medical issues are widely divergent ideally should be identified in the pre-trial stage and impartial examination ordered promptly. Remarkable proof of the effectiveness of the plans is seen, however, in the substantial numbers of cases which were settled after impartial examinations had been requested later in the proceedings, as in the New York figures.

Perhaps the greatest benefit of the plans is the intangible effect on many more cases than the ones in which they actually are used. The greatest service may well be rendered in those cases where they are *not* used, because the medical contentions of the parties are stated with less divergence, due to the influence of the plan.

The plans have generated great enthusiasm among the medical profession in most jurisdictions. Support and cooperation have been most evident in those most directly involved in the plans' operations. An active interest has been stimulated in other jurisdictions presently considering adoption of Impartial Medical Testimony Projects.<sup>133</sup>

## V. The Case Against the Court-Appointed Expert System

The three arguments against the plan may be boiled down to these: (1) Certain types

of medical conflicts are currently beyond a reasonably certain medical resolution. (2) A totally qualified and impartial expert is inherently unattainable. (3) The adversary system would be subverted through judicial embroilment in the controversy and through uncritical jury acceptance of the expert's opinion.

(1) *Certain types of medical conflicts are currently beyond a reasonably certain medical resolution.* This argument premises that medicine is not an exact science. Many areas in medicine contain inner divisions of opinion where the previously discussed "schools of thought" and different evaluation techniques make honest difference of opinion a normal state of affairs.<sup>134</sup> The finest specialists are unable to resolve these schisms with reasonable medical certainty. In this regard an Omaha defense attorney remarks that "where there is an honest dispute between doctors, an impartial doctor would not be of considerable help. As a practical matter, I wonder if it would not result in having two to one rather than one against one so far as medical testimony is concerned." Where medical knowledge has simply not advanced to the stage where certainty can be obtained, an outstate attorney observes that "the administration of justice would not be improved by the possibility of adding still a third opinion and thus injecting an extraneous issue into the litigation." A Grand Island attorney warns that "assuming the parties call their own medical witnesses, adding the uncertainty of panel testimony would only add to the total confusion of the conflicting medical testimony." A Lincoln attorney forecasts the ensuing situation: "... parties would continue the practice of getting independent evaluation, producing their own experts and attempting to prevail against the court-appointed expert. In other words, the battle of the expert with the spectacle of knowledgeable people substantially varying in their opinions and evaluation would nonetheless continue."

Many fear that positive harm would occur from introducing the court-appointed expert on grounds that the case would then be judged by the fortuitous circumstance of

his particular predilection to one school or technique. A doctor's individual background, and all of his education, training and experience have contributed to his total concept of medicine. They have made him "partial" toward personal conclusions and theories which differ in varying degrees from those of other doctors. An Omaha plaintiff's lawyer states that:

"The evaluation technique, of many doctors, especially on partial-permanent disability questions, is sincere but highly divergent . . . If the examination were, by the luck of the draw, conducted by a doctor whose evaluations tend to be highly liberal, the defense would be extremely unhappy. In the reverse situation, the defendant's attorney would be unhappy."

Chief Justice White capsules the ultimate objection:

"Bias, prejudice and personal philosophy about the elements of pain and suffering would enter into the picture of appointment of the expert. Bitterness would be apt to develop. Lawyers would be producing experts battling two adversaries."<sup>135</sup>

The counterargument first emphasizes the New York and Chicago experiences where cases fitting the description of "schools of thought" are hardly numerous.<sup>136</sup> Also, this criticism of panel testimony in areas where the medical profession is not in unanimity assumes too much. Proponents of the argument think in terms of two evenly balanced schools of thought which are in actuality few and far between. For instance,<sup>137</sup> the overwhelming weight of competent medical authority disdains the view that cancer can be caused by a single blow. No knowledgeable expert in this field now holds the view that such accidents either do or can cause a malignant tumor, yet there is an "opposite school" of thought. To ban the court-appointed expert from the legal arena here wreaks havoc with objective explanation to the fact finder about what modern medicine really thinks on a precise medical subject. Such gross exaggerations and distortions are not abnormal in modern courtrooms, and yet the lawyer seeking to establish his 100 to 1 shot will cry aloud that it is wrong to appoint an impartial expert because he might belong to the "opposite school." In these situations the two-school argument is



the "brain-child of lawyer-advocates" and has no sound basis in competent medical thought.<sup>138</sup> Use of the court-appointed expert here would trim the sails of clever advocacy.

In areas of legitimately differing evaluation techniques where the variances are not gaping the judge can always screen the use of court-appointed experts.<sup>139</sup> However, if appointment should occur in cases where there is room for disagreement, the panel expert would undoubtedly be the first to testify that differing schools or techniques legitimately exist, state the one to which he subscribes, and explain the other. There is no reason why opposing counsel cannot ask to explain this situation thus bringing the genuine disagreement to the attention of the jury.<sup>140</sup> Finally, as an Omaha attorney suggests, the right to file "minority reports" among a panel of three doctors would certainly clarify the area as one open to authentic dispute.

(2) *A totally qualified and impartial opinion is inherently unattainable.* The argument propositions first that even the most scrupulously objective physician might be wrong. In addition to the he-might-be-wrong approach the very nature of the plan limits an opinion based on all the facts since the court-appointed expert will not be brought into the picture until several months after the injury. A Lincoln attorney states that ". . . that many injuries take some time to materialize and a 'one shot' examination of the patient would in many cases not enable the expert panel to arrive at a fair and just determination." An Omaha attorney points out that "the treating physician has wider knowledge of the patient's background and a better realization of the effect of the injury on his patient. A panel necessarily would not have the realistic day to day contact that the attending physician has with pain and suffering." A Lincoln attorney states:

"A court-appointed expert would probably not have the advantage of observing the patient until an advanced stage of litigation. This would entail the problem that a court-appointed

doctor may not be able to make a fair evaluation in certain cases, not having the benefit of early observation of the injured party."

The counterargument replies that the mere fact that a panel expert might be wrong does not itself prove anything. We are dealing with expediency, not absolute assuredness. As F. Hastings Griffin, Jr., states:

If the proponents of this approach were able to support either the proposition that an impartial will more often be wrong than right or the proposition that juries without impartialists to help them have a better chance of deciding correctly than juries with impartialists, then they would have something. But this writer has not seen anyone make a real try to support either of those propositions.<sup>141</sup>

The reply to the fact that examination would be delayed until after pre-trial merely emphasizes that present defense examinations are often delayed so that the physician has no opportunity to measure pain and suffering. On balance, this is not a strong detriment for there is no reason the original attending physician cannot be called to fill in this information.

Even more basic, however, is the contention that "impartiality" is unobtainable.<sup>142</sup> A Lincoln orthopedist phrases the argument:

Theoretically an unbiased pontification should bring about a quick and proper solution to this problem. However, this is probably as mythical as the concept of "Justice" itself. It is impossible to get a completely unbiased opinion. In fact, it has been said with considerable wisdom that an unbiased opinion isn't worth very much. By the very nature of the criteria for choosing the panel, a bias is introduced into the system. The proposed medical experts would all be taken from a certain stratum of society. They would almost undoubtedly come from the well-to-do. If they were private practitioners, they might be conservative in philosophy and be inclined to favor an insurance company over a plaintiff. They conceivably might be biased against the concept of 'liability without fault.' If the proposed expert witness were taken from the staff of a medical school he might be more liberalistic and possibly more inclined to favor a plaintiff rather than an insurance company. I may exaggerate, but these biases will be present to more or less degree in each person according to his personal orientation. These biases may also increase after a period of service by court-appointment.

— End of Second Installment —



# Acute Arsenic Poisoning

## *Patients:*

Mr. X. Hospital No. 141122. Admitted 9-3-64. Dismissed 9-12-64.

Mrs. X. Hospital No. 141123. Admitted 9-3-64. Dismissed 9-19-64.

## *History: (Dr. Evans)*

This couple was well until noon of 9-3-64, at which time they had rum cocktails with a "sweet mix." After approximately 2 swallows, both patients noted that their drinks "tasted funny" and seemed to burn the back of their throats. They did not ingest any more of the drinks. Approximately 4 to 5 minutes after ingestion they simultaneously noted the onset of nausea which was followed in the next 30 minutes by profuse vomiting. The rescue squad was then called and they were both taken to Douglas County Hospital where they were treated with gastric lavage. Vital signs while at County Hospital remained normal. At approximately 3:00 p.m. on 9-3-64, they were transferred to the Bishop Clarkson Memorial Hospital. Their nausea and vomiting had persisted at the time of admission to our hospital and, in addition, Mr. X had had approximately 4 watery stools just before and at the time of admission.

## *Physical Examination on Mr. X:*

At the time of admission, physical examination revealed a well developed, well nourished, 54-year-old white male who appeared quite ill and was vomiting light yellow colored liquid material. BP was 110/60, rectal temperature 100.4° F, pulse 120, respirations 24. Examination of the throat revealed the mucous membranes of the oral pharynx to be somewhat injected, but no areas of burns were noted. The lungs were noted to be clear to auscultation and percussion. Heart revealed a regular rapid rhythm at 120. There were no abdominal masses or organomegaly. There were no areas of abdominal tenderness to palpation. Neurological ex-

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amination was essentially within normal limits.

## *Physical Examination on Mrs. X:*

At the time of admission, physical examination revealed a 53-year-old well developed, well nourished, white female who also appeared quite ill. She was complaining of headache, extreme nausea and vomiting, and occasional crampy abdominal pain. BP was 100/60, pulse 104, respirations 18. Examination of the throat revealed some reddening of the mucous membrane with whitened areas, presumably secondary to a caustic substance on the left tonsillar fossa and the uvula. Lungs were essentially clear to auscultation and percussion. Examination of the heart revealed a regular rhythm at 104 without murmurs. Examination of the abdomen revealed no masses or organomegaly. There were no areas of tenderness to palpation. Neurological examination was essentially within normal limits.

## *Laboratory Data:*

See table 1 (Mr. X) and table 2 (Mrs. X).

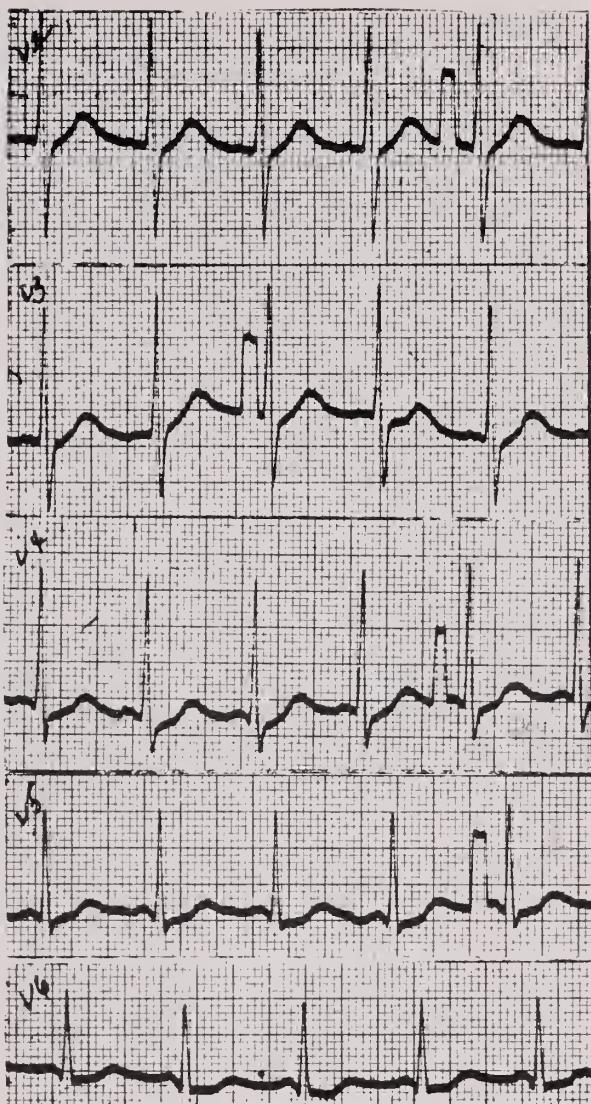
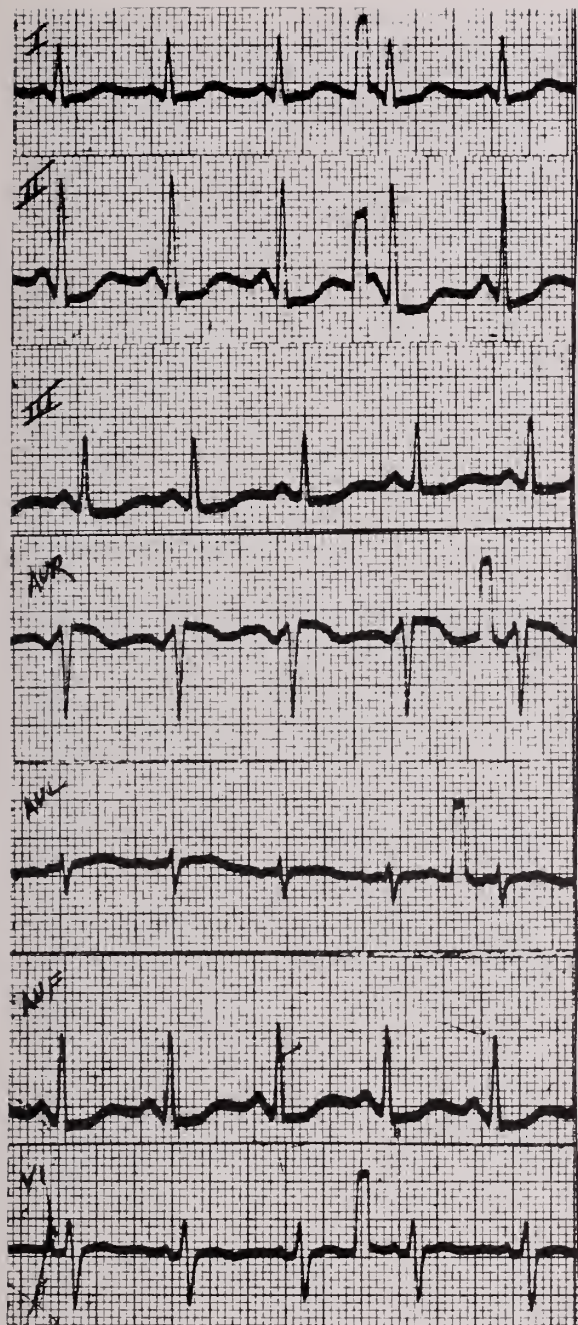


Figure 1. Mr. X. (9-4-64). R—106, PR—14, QRS—10. Nonspecific ST-T change which could be due to mixed electrolyte imbalance and/or myocardial ischemia.

EKGs: 9-4-64 (Dr. Angle). See figure 1 (Mr. X) and figure 2 (Mrs. X) with legends.

#### *Clinical Course — Mr. X:*

On 9-3-64, at admission, vital signs were stable with a BP of 110/60. Gradually through the course of the day, the BP came down until at about 9:00 p.m. the BP was noted to be 90/50. An IV was started with one ampule of Levophed and 25 grams of

Mannitol added. This immediately brought the BP up to 110/70. Later that evening, two ampules of Levophed were added to each IV to maintain the systolic BP at approximately 110 mm of mercury. The possibility of heavy metal poisoning was discussed and the patient was started on BAL (British Anti-Lewisite), 210 mg IM every 4 hours. By the morning of 9-4-64, the patient was symptomatically improved. The nausea and vomiting and diarrhea were gone. The Levo-



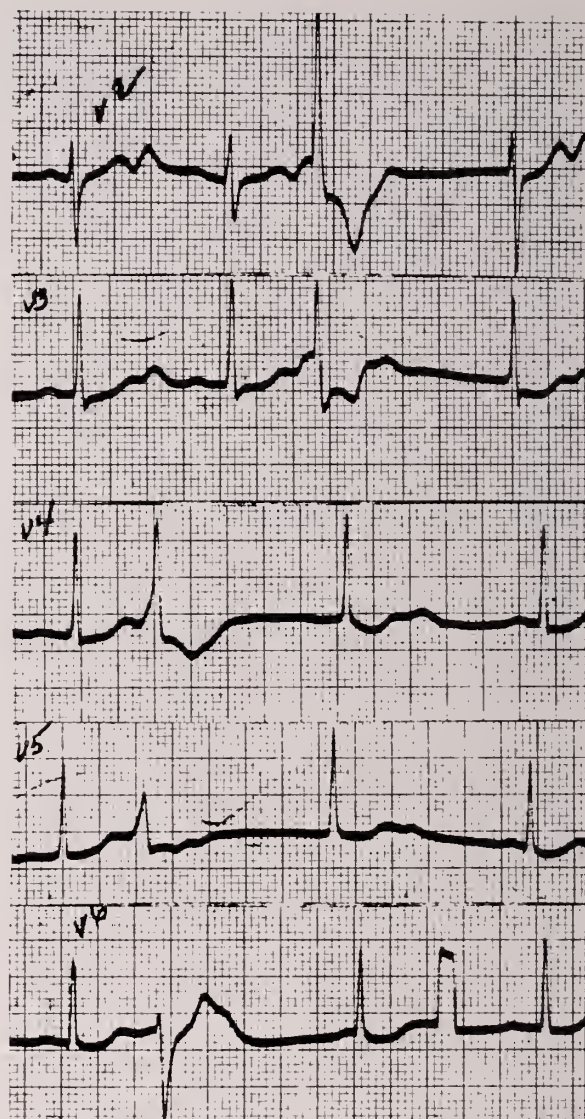
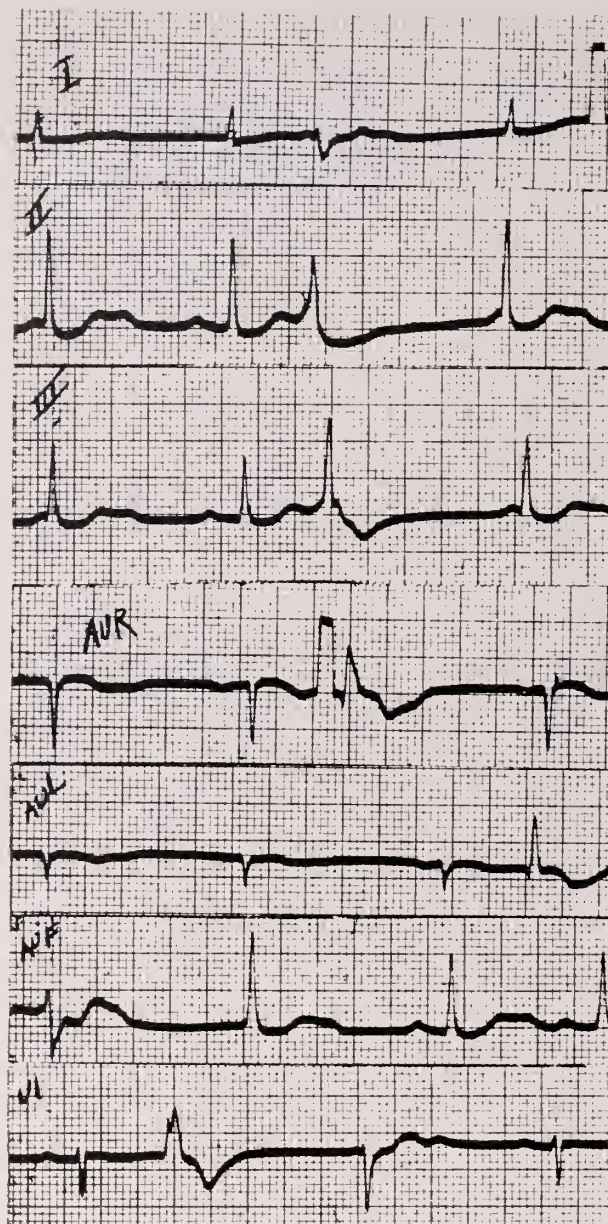


Figure 2. Mrs. X. (9-4-64). R—68, PR—22, QRS—10. First stage AV block. Frequent multifocal ventricular premature beats which are followed by post-extrasystolic wandering of the pacemaker. Nonspecific ST-T change consistent with mixed electrolyte imbalance and/or myocardial ischemia or digitalis effect.

phed was stopped, and his BP fell to 100/64; with the restarting of the Levophed drip, it immediately rose to 120/70. The patient's urine output was noted to be good. It was also noted that his serum potassium level was low, so 40 mEq of potassium chloride was added to the IV solution. By 9-5-64, the patient was feeling quite well and the Levophed was again discontinued. At this time the BP remained stable at about 116/78 and he required no more Levophed for maintenance of BP. On 9-6-64, the BAL dosage was cut to q.i.d. and on 9-7-64, it was cut to t.i.d. and finally on 9-8-64, it was decreased

again to b.i.d. Throughout this time, the patient continued to improve and his BP remained stable with systolic pressure of 120 to 130. On 9-10-64, seven days after the onset of the illness, a macular papular rash was noted primarily on the anterior trunk. Some was noted on the extremities (see figure 3). The next day, the rash faded considerably and by 9-12-64, the rash had completely disappeared. The patient had shown continued improvement and was dismissed on this date.

#### Clinical Course — Mrs. X:

At 3:00 p.m. on 9-3-64, at the time of ad-





Figure 3. Mr. X. Photo of right buttock and lateral thigh demonstrating noncoalescing arsenical eruption on Mr. X.

mission, the BP was noted to be 100/60. Within an hour the BP had fallen to 90/50, and 10 mg of Aramine were given IM. This immediately caused the BP to rise to 120/70, but over the next 2 hours fell again to 70/40. This dose of Aramine was repeated and another response was noted with BP of 130/80. The patient also received ACTH Gel, 40 units im, and 100 mg of Solucortef was added to the IV that was running. At 8:00 p.m. on 9-3-64, the BP was noted to be 80/40. One ampule of Levophed was added to the remaining IV, which brought the pressure to 110/60. As in the previous case, BAL 150 mg IM every 4 hours was also started. Mannitol, 25 grams, was added to the IV. Two ampules of Levophed per 1000 cc were necessary to maintain systolic BPs over 100. On 9-4-64, the patient was continuously maintained on Levophed solution, and the BP was noted to range from 80 to 130 systolic. At one point the IV infiltrated, and in the process of restarting the IV, the patient became pulseless and no BP could be obtained. The patient responded well when the IV was restarted. On this day also, the

heart was noted to be quite irregular, and the EKG showed PVC's and possible electrolyte disturbance. It was noted over the course of the day that the patient had received a minimum of 8 liters of fluid to maintain her BP. She received 40 mEq of potassium chloride in the IV solutions that day. Decadron, 4 cc IM every 8 hours, was started. On 9-5-64, the patient was noted to be quite confused, presumably secondary to electrolyte disturbance. Levophed was still necessary to maintain her BP. On 9-6-64, BAL dosage was cut to t.i.d. The patient was still noted to be somewhat confused, but was markedly improved. The Levophed was stopped and the patient maintained a systolic BP of between 90 and 100. On 9-8-64, the patient's confusion was noted to be clearing. The BAL was decreased to b.i.d. The patient continued to improve and on 9-11-64, the BAL was stopped. The patient was noted to have had a chill the night before and temperature on this day was noted to be 102° F. A macular papular rash was noted that day primarily on the trunk (see figure 4), but also diffusely



Figure 4. Mrs. X. Photo of left ventral abdominal wall demonstrating coalescing arsenical macular papular eruption on Mrs. X.



Figure 5. X-ray positive prints of non-radiopaque sediments from sweet mix done at time of admission.

involved the extremities, more so the upper. The patient continued to run a temperature of approximately 99 degrees through the rest of her hospital course. On 9-14-64, the rash had completely disappeared. The patient continued to improve and on 9-19-64, the patient was discharged.

*Toxicological Analysis:* (Dr. Rappolt)

Spot tests and X-ray examination of the material contained within the rum bottles and "sweet mix" at the time of admission revealed no strong acids or alkali. X ray of the spun-down sediments from said containers revealed no radiopaque materials (see figure 5) such as would be encountered with metallic arsenic or any arsenical compound which was not dissolved; in other words, no arsenic at a valence of zero. This was interesting in that the arsenic compound used would first have to be dissolved

in a solvent and this solution poured into the bottles in question or strained after partially dissolving in an aqueous media.

Shown is an X ray (see figure 6) taken of free arsenic recovered from a dog's stomach (plus a known control and a blank) illustrating the radiopaque properties of arsenic with a zero valence.

The fatal dose of arsenic as the trioxide is about 120 mg or 2 grains. The MAC for food residue is limited by Federal law to 0.65 mg or 1/100 grain per pound.

*Discussion:* (Dr. Lehnhoff)

In reviewing the problem these two patients presented, it exhibited many of the characteristics of acute poisoning by the ingestion of arsenic. First symptoms are classically nausea and vomiting within the first 10-15 minutes of ingestion of the ma-

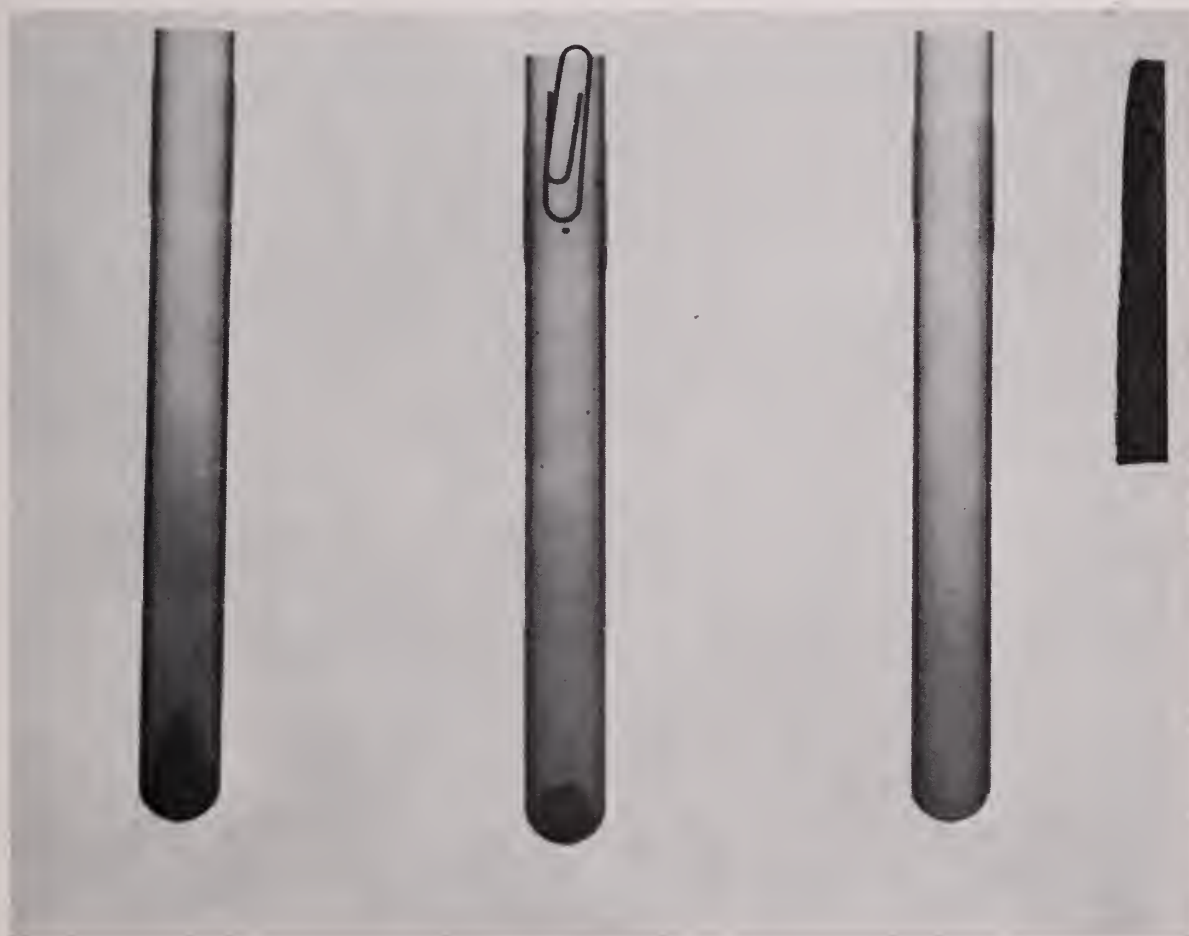


Figure 6. X-ray positive prints of (left to right): First tube: Free arsenic recovered from dog's stomach via lavage. Second tube: Known control,  $\text{AsO}_3$  introduced into tube. Third tube: Blank control, gastric aspiration from dog.



Table 1

## LABORATORY DATA — MR. X

| Date—1964                      | 9/3                                     | 9/4 | 9/5                                               | 9/6    | 9/8           | 9/9           | 9/10 | 9/11                                              | 9/18 |
|--------------------------------|-----------------------------------------|-----|---------------------------------------------------|--------|---------------|---------------|------|---------------------------------------------------|------|
| Hemoglobin-----                | 15.0                                    |     | 16.0                                              |        |               |               |      | 11.5                                              |      |
| WBC-----                       | 13,000                                  |     | 8,700                                             |        |               |               |      | 5,900                                             |      |
| Differential-----              | 4 band<br>52 segs<br>38 lymph<br>6 mono |     | 12 band<br>55 segs<br>26 lymph<br>6 mono<br>1 eos |        |               |               |      | 11 band<br>50 segs<br>31 lymph<br>1 mono<br>5 eos |      |
| U. A.-----                     | neg                                     |     |                                                   |        |               |               |      | rare wbc<br>+<br>granular<br>casts                |      |
| Serology-----                  |                                         | neg |                                                   |        |               |               |      |                                                   |      |
| SGOT-----                      | 41                                      | 63  | 92                                                | 91     | 68            |               |      |                                                   | 13   |
| BUN-----                       |                                         | 15  |                                                   |        |               |               |      |                                                   |      |
| CO <sub>2</sub> - mEq/L-----   |                                         | 19  | 19.5                                              |        |               |               |      |                                                   |      |
| Potassium mEq-----             |                                         | 3.5 | 3.7                                               | 3.5    |               |               |      |                                                   |      |
| Sodium-----                    |                                         | 135 | 129                                               | 135    |               |               |      |                                                   |      |
| Chloride-----                  |                                         | 103 | 103                                               | 104    |               |               |      |                                                   |      |
| Bilirubin-----                 |                                         |     | 0.8 mg                                            | 1.0 mg |               |               |      |                                                   |      |
| Urine for<br>Urobilinogen----- |                                         |     |                                                   |        |               |               | neg  |                                                   |      |
| BSP-----                       |                                         |     |                                                   |        |               | 39%<br>retent |      |                                                   |      |
| Prothrombin<br>Time-----       |                                         |     |                                                   |        | 100%<br>cont. |               |      |                                                   |      |
| Ceph. Flocc-----               |                                         |     |                                                   |        |               |               |      | neg                                               |      |
| Thymol<br>Turbidity-----       |                                         |     |                                                   |        |               |               |      |                                                   | 2.5  |

Table 2

## LABORATORY DATA — MRS. X

| Date—1964                           | 9/3                                               | 9/4                                      | 9/5                                      | 9/6    | 9/7         | 9/8    | 9/10                                    | 9/15                                             | 9/16 | 9/25 |
|-------------------------------------|---------------------------------------------------|------------------------------------------|------------------------------------------|--------|-------------|--------|-----------------------------------------|--------------------------------------------------|------|------|
| Hemoglobin-----                     | 13.7                                              | 14.3                                     | 14.2                                     |        |             |        | 11.2                                    | 11.5                                             |      |      |
| WBC-----                            | 7,700                                             | 15,820                                   | 13,300                                   |        |             |        | 8,700                                   | 10,500                                           |      |      |
| Differential-----                   | 10 band<br>56 segs<br>31 lymph<br>2 mono<br>1 eos | 40 band<br>47 segs<br>10 lymph<br>3 mono | 27 band<br>48 segs<br>24 lymph<br>1 mono |        |             |        | 28 band<br>64 segs<br>7 lymph<br>1 mono | 3 band<br>64 segs<br>24 lymph<br>5 mono<br>1 eos |      |      |
| U. A.-----                          | 1+ sugar<br>1+ rbc<br>1+ wbc<br>2+ epith          |                                          |                                          |        |             |        | 3+ wbc<br>trace<br>protein              |                                                  |      |      |
| Serology-----                       |                                                   | neg                                      |                                          |        |             |        |                                         |                                                  |      |      |
| SGOT-----                           | 27                                                | 35                                       | 79                                       | 56     | 43          | 55     | 71                                      |                                                  |      | 23   |
| BUN-----                            | 17                                                |                                          |                                          |        | 21          |        |                                         |                                                  |      |      |
| CO <sub>2</sub> -mEq/L-----         |                                                   | 20.0                                     | 18.5                                     |        | 19          |        |                                         |                                                  |      |      |
| Potassium mEq---                    |                                                   | 3.1—a.m.<br>3.9—p.m.                     | 4.6                                      | 4.5    | 4.3         | 3.4    |                                         |                                                  |      |      |
| Sodium-----                         |                                                   | 127                                      | 110                                      | 125    | 142         | 137    |                                         |                                                  |      |      |
| Chloride-----                       |                                                   | 95                                       | 83                                       | 89     | 109         | 115    |                                         |                                                  |      |      |
| Bilirubin-----                      |                                                   |                                          | 2.0 mg                                   | 1.6 mg |             | 1.1 mg |                                         |                                                  |      |      |
| Urine for<br>Urobilinogen---        |                                                   |                                          |                                          |        |             |        | neg                                     |                                                  |      |      |
| BSP-----                            |                                                   |                                          |                                          |        |             |        | 32%<br>ret                              | 4%<br>ret                                        |      |      |
| Calcium-----                        |                                                   |                                          |                                          |        | 8.3<br>mg % |        |                                         |                                                  |      |      |
| Phosphorus-----                     |                                                   |                                          |                                          |        | 2.7<br>mg % |        |                                         |                                                  |      |      |
| Urine: mEq/L<br>Protein-----        |                                                   |                                          |                                          |        | neg         |        |                                         |                                                  |      |      |
| Sodium-----                         |                                                   |                                          |                                          |        | 17          |        |                                         |                                                  |      |      |
| Potassium-----                      |                                                   |                                          |                                          |        | 96          |        |                                         |                                                  |      |      |
| Urea Nitrogen-----                  |                                                   |                                          |                                          |        | 913         |        |                                         |                                                  |      |      |
| Thymol<br>Turbidity-----            |                                                   |                                          |                                          |        |             |        |                                         |                                                  | 15   |      |
| Ceph. Flocc.-----                   |                                                   |                                          |                                          |        |             |        |                                         |                                                  | neg  |      |
| 2-hr postpran-<br>dial bl. sugar--- |                                                   |                                          |                                          |        |             |        |                                         |                                                  | 70   |      |

terial, and we noted that these patients experienced such symptoms in approximately 4-5 minutes. This is followed by diarrhea, muscle cramps, and varying degrees of prostration just as is recorded in this history.

In the early evening of September 3rd, 1964, Drs. Fellman, Rappolt, and I agreed that poisoning by ingestion of arsenic was the most likely diagnosis and that Dimer-caprol (BAL, British Anti-Lewisite) should be administered in standard prescribed dosage.

Our clinical impression was subsequently confirmed by the isolation of significant amounts of arsenic in the urine.

The immediate supportive measures, including gastric lavage and vasopressor substances, and adequate fluid and electrolyte replacement played therapeutic roles of equal or perhaps greater importance than the administration of the specific antidote (BAL).

It may be noteworthy that BAL is quite effective in acute arsenic poisoning but has little effect on the chronic structural changes (neuropathy, chronic hepatitis, pigmentation of the skin) of chronic intoxication. I am sure that its administration to these two patients shortened their convalescence.

*Follow-Up:* 2-1-65 (Dr. Fellman)

At this date (5 months after said ingestion) lab. indices and liver profiles on both

Mr. and Mrs. X are normal, but, symptomatically, Mrs. X has diffuse paresthesia on both palms and soles which have not been relieved by B<sub>12</sub> injections. The subsequent toxicological analysis by Dr. A. R. McIntyre and Dr. Merrill Hendrickson of the University of Nebraska College of Medicine revealed significant, if not lethal, amounts of solvated arsenic found in the bottles in question, and sundry other alcoholic beverages in the home of our patients.

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"I will never forget a man whose story taught me, as I have been taught a thousand times, that if a physician is wise he will not spend much time continuing to treat unsuccessfully a laboratory-made diagnosis . . ." (Alvarez, Walter C.: *The Vanishing Art of Diagnosing With Eyes and Ears*. *New Physician*, January, 1964, page 5).



# NEUROLOGIC MANIFESTATIONS of *Air and Gas Embolism*

**W**HILE not a common problem, air embolism is no rarity as yet. More frequently reported in previous decades, it continues to lurk as a possibility in situations of emergency, improvisation, untrained personnel and inattention to detail. In one report as late as 1960, almost 20 per cent of accidents in surgery and anesthesia appeared to involve air embolism.<sup>1</sup>

Air embolism is not always recognized — a tragedy precluding treatment which is often effective. It has been misdiagnosed as pulmonary embolism, cardiac arrest, coronary thrombosis, shock, or cerebral vascular accident. Without proper technique in autopsy, it may be overlooked even there.

Air embolism may be venous or arterial, the former more common. An occasional patient will reveal both forms.

## Venous Air Embolism

Air (or gas) will enter the venous system, thence to the right heart, under two conditions:

1. Venous channels are opened to air and lie sufficiently above level of right heart that venous pressure at this opening is less than pressure of air surrounding. Intravenous suction of air occurs. Strong inspiratory movements of chest increase this risk.
2. Air under pressure enters venous channels.

Venous air embolism may appear in surgery, trauma, diagnostic pneumographies, therapeutic air injections, obstetrics, or intravenous procedures. It may occur in oversight, accident, neglect, foul play or rarely, suicide. Approximately 50-100 ml of air are necessary to cause critical symptoms, the amount depending on the state of patient's health, speed and pressure of injection, and posture of the patient.<sup>2, 3</sup> Deep inspiration, cough, sneeze, strain or controlled respiration may add to venous suction.<sup>4</sup>

In the past decade, reports of air embolism

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appear as follows, in approximate order of frequency.<sup>2, 3, 5, 6, 7</sup>

Pneumoperitoneum<sup>8-19</sup>  
Retroperitoneal pneumography<sup>20-27</sup>  
Pregnancy, labor, puerperium, abortion<sup>28-36</sup>  
Intravenous procedures<sup>2, 37-41</sup>  
Uterotubal insufflation<sup>42-44</sup>  
Surgery or trauma especially to:<sup>4, 45, 46</sup>  
    Head, neck  
    Upper thorax, spine  
    Pelvis<sup>47, 49</sup>  
    Heart  
    Lungs  
Pneumothorax, thoracentesis (usually arterial embolism)<sup>50-53</sup>  
Hollow viscus insufflation; joint insufflation  
Maxillary sinus insufflation<sup>54-57</sup>  
Pneumoencephalography, ventriculography<sup>58-62</sup>  
Cardiography<sup>63</sup>

It has been pointed out often that CO<sub>2</sub> or N<sub>2</sub>O are by far the safest gases to employ in pneumography since they are more readily soluble in body fluids than are air, oxygen, nitrogen, or helium.<sup>2, 7, 11, 20, 21, 44, 63-66</sup> Carbon dioxide may be injected intravenously into healthy humans to extent of 50-100 ml with no serious consequences.<sup>2</sup>

The presacral route of retroperitoneal pneumography, now preferred over the flank approach, continues to demonstrate a small incidence of air embolism. Injection into spleen or liver may occur with pneumoperitoneum. Repeated needling, technical difficulty or much manipulation may set the stage for embolism.

Pregnancy may provide open venous sinuses and air embolism occasionally appears particularly in following circumstances:

- Abortion produced by injection into uterus
- Assuming knee-chest position postpartum
- Vaginal insufflation during pregnancy or postpartum
- Vaginal powder insufflation
- Douching
- Sex-play<sup>35</sup>
- Accident or foul play
- Obstetrical complications
  - Caesarian section
  - Placenta previa
  - Abrupto placentae
  - Uterine rupture
  - Manual removal of placenta
- Accidental postpartum air entrapment<sup>33</sup>

The Trendelenburg position, by lowering position of the heart below that of the pelvis, is often conducive to air embolism.

Other pelvic trauma or surgery rarely may lead to intake of air. This includes genitourinary tract, gynecologic sites and orthopedic conditions likely aided by Trendelenburg position.<sup>47-49</sup>

Head-up surgery has long been known to favor air embolism, again with venous suction allowed by heart level below site of operation and respiratory pumping of chest.

Accidents in intravenous therapy and transfusion are known. Improper cannulization may allow air leak at site of venous entry. Rapid transfusion under increased air pressure has caused air embolism. Even blood donors are at risk on rare occasions when gravity or vacuum systems do not function.

The significant effect of venous air embolism is the accumulation of air in the right heart chambers, preventing efficient function of atrioventricular valves while froth and bubbles in pulmonary artery obstruct flow of blood to the lungs. An "air trap" occurs. Venous pressure rises, cyanosis and hypotension appear. The clinical picture is that of acute shock and hypoxia, with cerebral manifestations presenting outstandingly (unless patient is anesthetized):

- Occurrence during or shortly following etiologic circumstances described above
- Sudden onset and evolution
  - Chest pain, dyspnea
  - Syncope, coma
  - Cyanosis

- Circulatory failure
- Convulsive phenomena (in 30 - 50 per cent)<sup>3, 7, 8, 10, 29</sup>
- Churning, mill-wheel murmur in right ventricle
- Therapeutic response to turning patient on left side, head and chest lowered
- EKG: characteristic pattern of right heart strain and acute myocardial ischemia<sup>67</sup>
- In severe involvement, evolution of other indications of critical cerebral hypoxia. Includes prolonged coma, stupor, delirium, choreoathetosis, plegias.
- Approximately 25-35 per cent mortality untreated. Those surviving appear to retain no sequelae.
- Chest X ray may demonstrate air site.

The possibility of *arterial* air embolism occurring with or as a consequence of *venous* air embolism is known.<sup>9, 13, 28</sup> This may occur with:

- Concomitant injury to pulmonary veins or left heart.
- Paradoxical entry to left heart via congenital foramen.
- Passage of many minute bubbles through pulmonary capillaries and shunts to left heart (rare, doubtful)<sup>39a</sup>

Another uncommon possibility of direct cerebral involvement occurs with entry of air into cerebral venous sinuses by way of paravertebral venous plexus (or, paradoxically, via superior vena cava?) in a straining, struggling patient.<sup>3, 39</sup>

Treatment must be immediate, turning patient on his *left* side. If possible, a slight tilt with head and chest lower than pelvis should be maintained. This permits the air to rise from the pulmonary artery back into the ventricle, allowing blood to gravitate into the pulmonary artery. Cardiac massage may be necessary and lifesaving although not without slight risk of pressing air into the arterial system of the rare patient with septal defect.<sup>39a, 67a</sup> Withdrawal of air by needle and syringe may be employed by those expert when other measures fail.

### Arterial Air Embolism

Air in arterial circulation poses the threat of an air-trap (or "air-lock") in the artery or arteries involved. Acute, critical involvement appears in coronary and cerebral vessels. The amount of air necessary to oc-

clude an artery is very small although CO<sub>2</sub> is tolerated remarkably. The sources of arterial air embolism include:<sup>2, 5, 7, 43, 50-53, 68</sup>

Tear in lung and pulmonary veins

Trauma, surgery

Injection (commonly pneumothorax)<sup>50-51</sup>

Includes pulmonary injury from blast<sup>68</sup> and dysbarism (barotrauma)

Overdistention by defective anesthesia or breathing apparatus<sup>68a</sup>

Thorocentesis (bronchovenous fistula)<sup>68b</sup>

Cardiac surgery

Injection into aorta, carotid, vertebral arteries

Intrinsic air (dysbarism)

Altitude

Underwater

Hyperbaric treatment accidents

Paradoxical embolism from right heart

? Passage via pulmonary capillaries from right heart

The clinical picture depends much on the quantity of air admitted, how rapidly, under what pressure and the patient's position. It may be outlined thus:

Etiologic clues

Cerebral embolic phenomena (single, multiple)

Acute coronary occlusion

Air bubbles in retinal arteries

Marbling of skin

Demarcated area of pallor on tongue (ischemic)

Coma (convulsions may occur)

X ray may demonstrate air in major vessels, including cerebral

Prevention of cerebral air embolism might be effected by prophylactic use of head-down position lying on left side. Once embolism has occurred, treatment is directed at dilating cerebral and coronary flow. Cerebral artery vasodilation is attempted, namely with use of 95 per cent O<sub>2</sub>-5 per cent CO<sub>2</sub> inhalation. Hyperbaric compression has been suggested.<sup>43, 69</sup> Cardiac massage (open) may be necessary to strip coronary vessels of air.

(References available from author).

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"The first problem that an author must solve is that of documentation in the field that he proposes to investigate, and only in this way will he be able critically and honestly to assess the past and make deductions for the future . . ." (From an editorial, "Author's Code of Honor," by Oliaro, T.: *Pan Med* 1:153, Sept., 1959).



# PHYSICIANS' VIEWS ON ALCOHOLISM

With Special Reference to

## *Alcoholism in Women\**

**P**HYSICIANS are sometimes criticized for their lack of interest in the alcoholic patient. A recent survey of one-third of the physicians in an urban area indicates that such criticism is unwarranted. These physicians consider alcoholism to be an illness, they have many patients in treatment for alcoholism, and they see their responsibility regarding this illness as one that extends far beyond the hospital or office walls.

The above findings were obtained from interviews with physicians as a part of a larger study on alcoholism in women. The physicians were interviewed first, to obtain volunteers from among their female alcoholic patients to participate in the study and second, to obtain physicians' views on alcoholism. This paper will confine itself to the second objective.

### Method

The physician sample began as a selected sample of 55 physicians known to work with alcoholics and who were thought to be willing to participate in such a study. Because of the great interest shown by this specially selected group, a second and larger sample (106) was chosen by random selection of every third physician in the metropolitan area. The total sample represents 40 per cent of all physicians in the community and contains an adequate cross-section of the specialties. Willingness on the part of the physicians to volunteer their time to the study merits special comment. From a possible 209 interviews, 161 were obtained, or a 77 per cent response. Of those who did not participate, most were specialists (as pathologists, ophthalmologists and radiologists) who claimed they seldom, if ever, saw alcoholic patients.

\*This study was made possible by a grant from the Licensed Beverage Industries, Incorporated.

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The interviewing was done by a registered nurse. Her orientation consisted of study of the problem of alcoholism, discussion of interviewing techniques, and the conducting of trial interviews. During this time, results of the interviews were evaluated and necessary changes in the interviewing instrument were made. Verbatim recording was encouraged as much as possible on the part of the interviewer.

### Findings

*Diagnosing Alcoholism.* The study shows that physicians consider a person to be an alcoholic when his drinking interferes with his work, health, social life, or family life. Taking a careful history from the patient and his family, or both, was mentioned most often as essential in the diagnosis of alcoholism. This is re-emphasized by the fact that most of the following information which physicians think is important in diagnosing alcoholism is information obtained from a good history.

An uncontrolled need for alcohol is seen by physicians as a significant symptom. They believe that alcoholics feel that they "have" to have a drink. The amount of alcohol consumed is also important to know, but the physicians did not elaborate on what they meant by "too much" or "drinking to excess." Many thought it important to know the time of day a person drinks, whether or not the person drinks alone, and if he drinks every day. Three physicians stated that they routinely ask specific questions as to the alcohol intake of their patients.

Considerable mention was made of the presence of denial in alcoholic patients. It was expressed in many ways as denial that a problem with alcohol exists, minimizing the amount of alcohol consumed, sneaking drinks, and hiding the liquor supply.

A person's intoxicated behavior is also important to physicians in their diagnosis of alcoholism. They suggest inquiry as to frequency of intoxication, and the type of acting out behavior when intoxicated. Other symptoms that make alcoholism a diagnosis to be considered are tremors, poor nutrition, vague physical complaints with poor response to treatment, frequent infections, and injuries during drinking episodes. One anesthesiologist stated that he is alerted to the possibility of alcoholism in patients who need more anesthetic than others. As the disease progresses with liver damage, memory impairment, convulsions, delirium tremens, or Korsakoff's psychosis, diagnosis of alcoholism becomes less difficult.

*Behavior Characteristics of the Alcoholic.* Besides asking for diagnostic criteria in alcoholism, an attempt for more specificity was made by asking physicians what behaviors are characteristic of the alcoholic. A list of these responses with minimal categorization can be found in Appendix I.

Problems in interpersonal relations are apparent throughout the list and have been pulled out more specifically in relation to family and marital adjustment. Many behaviors point to a person who lacks self-discipline, is immature and possesses a great number of dependency needs. The alcoholic is pictured as a person with many undesirable characteristics in comparison to ideals set out by society. He has made a poor emotional adjustment to the ordinary problems of life, and his use of alcohol in some way seems related to this poor adjustment.

*The Female Alcoholic.* The 161 physicians in this study treated 400-500 female alcoholics in a period of one year. While only an estimate, the number is surprisingly large when it is only women, and when we consider that so many alcoholics do not seek help. Even if they do seek help, it may not be from a physician. We can therefore

postulate that the large number of female alcoholics in treatment represent only a fraction of the women in the community who are suffering from alcoholism.

Another finding of significance to physicians is that only about 14 per cent of the 400-500 women went to the physician specifically because of their problem with alcohol. This means that the diagnosis of alcoholism had to be uncovered by the physician through his inquiries and examinations rather than by the patients' volunteering information about their problem with alcohol.

Sixty-eight per cent of the physicians believe that the behavior of women alcoholics differs from that of men alcoholics. The major difference is that women are more protected by their position in the home so it is easier for them to hide the problem. It is not only easier for them to hide the problem, but they are able to hide it for a longer period of time. The women are more secretive about their drinking; they do their drinking at home and they drink alone more than men do. Another difference is that liquor is more accessible to women at home than it is for a man at his place of business. Physicians believe that women minimize the amount of liquor they drink more than men and that they are more sensitive about others knowing how much they have been drinking. Women drink gin or vodka to keep from being detected. They are more sly, evasive, and sneaky about their drinking.

Physicians believe that reasons for drinking are also different for women. They say that women drink more often in response to a crisis-situation such as an unsatisfactory love affair, financial problems, lack of children, divorce, or any other disappointing situation.<sup>1</sup> They may drink to ease arthritic pain or for reasons related to the menopause and menopausal depression. Women suffer more fear and anxiety because of competitive social situations, and so drinking relieves this anxiety. Many physicians mentioned that women have more leisure time, they become bored and life be-

1. This finding is not substantiated in the interviews with 36 alcoholic women and will be alluded to in the discussion part of this paper.



comes dull and monotonous. They turn to alcohol as an escape from this type of living.

The following comments indicate that physicians believe the woman alcoholic to be a sicker person than the man alcoholic. They say that women have more basic personality disorders; they are more hostile, angry, unhappy, self-centered, withdrawn, depressed, and more subject to mood swings; they are more emotional, lonely, nervous; they have less insight, and are not as likeable as men alcoholics. There was disagreement as to the woman alcoholic's moral code. Some felt that she had loose sexual morals, had more psychosexual conflict as homosexuality, and was more likely to get into social difficulties. Others felt that the married women kept good contact with their families. They stated that while they may cause greater devastation within the family, they seldom stray away as the male alcoholic has a tendency to do.

*The Physicians' Responsibility in Alcoholism.* Physicians believe they have a responsibility to treat alcoholism as they do in any other illness. They feel that their first responsibility is that of recognition of the problem. It should then be pointed out and discussed with the patient. The physician must treat the acute phase, the resulting physical disability, and the underlying causes of the illness. Alcoholism should be treated without prejudice, with kindness and understanding. Help in the area of interpersonal relations, psychotherapy, and counseling of the patient and his family were mentioned as responsibilities of the physician.

Another responsibility was that of referral of the patient to others. Physicians were asked what resources they used for referral of alcoholic patients. The following summarizes the resources for referral and the percentage of physicians who mentioned that resource: Psychiatrists — 68 per cent, Alcoholics Anonymous — 45 per cent, Clergy — 9 per cent, Internists — 8 per cent, Family Physician (from specialists) — 7 per cent, Social Worker — 1 per cent. Others mentioned only once were a neurologist, psychologist, and family coun-

seling agency. If a referral was made, the physician believed he should keep in contact with the patient and the referral agency for assistance and follow-up of the patient's progress.

Physicians saw themselves as having a responsibility in educating their own patients about alcoholism as well as supporting education of the general public regarding the use of alcohol. People should be taught that alcoholism is an illness, and taught about the deleterious effects of alcohol on their health. Special mention was made of education aimed at teenagers about the use and effects of alcohol. The physician should make himself available to civic groups in their efforts in public education. Some mentioned that the doctor himself should be more knowledgeable about the problem and that education of his own profession should be supported. One man put it this way, "Most of us are unprepared to manage this problem and are more willing to unload it on someone else."

Only a few physicians denied responsibility in alcoholism. One man stated that "antabuse should be sneaked into the patient's coffee by previous consultation with the patient's spouse." Another stated, "I don't like the alcoholic and I don't treat him for that. My attitude is negative." Another response was "I feel so blunted with results that I wonder if the doctor has the time it takes to work with these people. There is not enough social pressure to bring an alcoholic to grips with his problem so that treatment must wait until a drastic thing happens."

Analysis of responses to this question by age groups showed some differences. The under-40 physicians felt more strongly that it was their responsibility to point out the problem to their patients. Also the under-40 group believed the MD should refer to Alcoholics Anonymous, but was less likely to refer patients to a psychiatrist. From the response it appears that the younger group would attempt treatment themselves before referral anywhere except to Alcoholics Anonymous.

*The Community's Responsibility in Alco-*



*holism*. Ninety per cent of the physicians believe that the community has a responsibility toward the problem of alcoholism. This responsibility fell into five general areas, these being education, provision of treatment facility, the support of research, better use of available resources, and certain legislative action.

Education of the public was seen as an extremely important responsibility of the community. People should know early signs and symptoms of the illness, the extent of the problem, and the cost of alcoholism to the community. A more knowledgeable public will not only help prevent problem drinking, but it will also help in the rehabilitation of alcoholics if they can return to more understanding families and friends. Reduction of the social stigma attached to alcoholism should occur with an educated public. Again physicians stressed that special teaching should be geared to the teenage population. It was mentioned that priests and ministers should be better informed about the subject of alcoholism so that they might be used more in a consulting role. It was also suggested that the amount of drinking and the amount of liquor advertisement seen on television could be reduced.

All responses related to facilities indicated that the alcoholic patient needs a special place for treatment and rehabilitation. Suggestions about the facility were that it should be (1) an entire hospital, (2) a separate area in a psychiatric hospital, (3) a separate area in a general hospital, and (4) a special outpatient facility or clinic. Many physicians emphasized that the facilities should be staffed with specially trained personnel; admission should be on a voluntary basis; and the facility should be available to both men and women. Family counseling should be an integral part of the treatment program. Three men criticized facilities that have a "country club" atmosphere and suggested a work regimen at the earliest possible time for all patients. The few physicians in the sample who do not consider alcoholism an illness suggested merely "locking them up." One even suggested a "detention chamber" to keep alcoholics from harming themselves and others.

Besides treatment facilities, an alcoholic information center was proposed as a benefit for the patient, family and physician. Strengthening of the community mental health program was another suggestion which would include both public education and a patient treatment center.

Physicians felt that the community had a responsibility in research and this was defined more specifically as research in case finding community surveys, and financial support of other types of research in alcoholism. They urged better use of the present resources in the community because physicians, as a group, do not know all that is available. Family service organizations could be used more in counseling and social welfare agencies could be more active in patient follow-up.

Suggestions from physicians that had to do with legislation follow: habit forming qualities should be printed on the label of alcoholic beverages; there should be better law enforcement regarding the selling of liquor to inebriates and minors; there should be improved enforcement of laws in relation to drinking and driving and in relation to crimes associated with drinking; more should be done in a legal way when children are the innocent victims of parental neglect due to excessive drinking.

The over-40 physicians placed more stress on the community's responsibility in educating the public about alcoholism than those under 40 years of age. There was no significant difference in responses when examined in the light of physician's specialty.

Occasionally comments are made regarding policies of general hospitals in admission of alcoholic patients when alcoholism is the only diagnosis. Thirty-nine physicians were asked if they could hospitalize patients in a general hospital in this community with the diagnosis of alcoholism. Sixty-one per cent answered "yes" and thirty-three per cent answered "I don't know," so even though the sampling is very small, the responses do not indicate a problem in this area.

### Discussion

The physician was the first person to

whom most of the women alcoholics of this study turned when they needed help. At least initially, this puts the physician in a strategic position to treat the alcoholic. Even though, as the study pointed out, the patient often comes to the physician for other reasons, the possibility of his truly wanting help with his alcoholism should not be underestimated. As one of the first helping resources sought out by the patient, the physician becomes a key person in directing the patient's treatment and rehabilitation.

While physicians believe they have a responsibility to discuss a patient's drinking problem with him, many acknowledged the fact that they often fail to do this. Sometimes they believe it would harm a relationship upon which treatment of another condition depends. Also the relationship that has been built up may be so damaged that complete withdrawal from medical help may result. While physicians believe they should approach the problem in a direct manner, they are aware that when and how to do this is difficult and therefore the problem with alcohol is often delayed and even ignored.

Related to the tendency of some physicians to neglect a patient's problem with alcohol were comments made by nurses who were interviewed for their views on alcoholism. The nurses stated that when the physician does not make known the diagnosis of alcoholism to nursing personnel and does not therefore include them in the treatment plan, the nurse is helpless in giving the type of care she knows that the patient needs. It also may be that the physician is losing what could be a valuable resource person to help in his patient's recovery.

Further study is indicated on reasons why women drink in an effort to prevent progression to alcoholism. Physicians believe that unlike men, women drink more in response to a crisis situation as a death or divorce. However, this was not evidenced in the sample of women alcoholics who stated they drank to excess to improve their own self-image in meeting the everyday problems of life. Only two of 35 women gave death of a loved one as a reason for their excessive drinking.

In conclusion, the study points out that physicians consider alcoholism to be an illness and that they are interested in treating this illness. They were specific in elucidating their own responsibility toward the problem and acknowledged their support of efforts of others to help in prevention and rehabilitation of the alcoholic.

## APPENDIX I

### Behavior Characteristics of Alcoholics As Given by Physicians

#### Responses relating to the drinking pattern:

- Alone — 4
- Time of day — 3
- Unacceptable places — 2
- Uncontrolled need for liquor — 2
- Rationalization about drinking — 2
- Change in kinds of beverage
- Spree drinkers
- Intoxicated behavior
- Defensive about drinking
- No consistent drinking pattern
- Unhappy without liquor
- Able to hold liquor well
- Unable to hold liquor well
- Behavior change when drinking — 4
- Great conversationalists after a few drinks
- Lack of self-confidence and shy when not drinking; more extrovert and reassured after a few drinks
- Pleasant when sober; mean and belligerent when drunk

#### Responses relating to marital adjustment:

- Usually have marital trouble
- Family conflict and in-law difficulty
- When dry, paranoid about spouse's fidelity
- Poor interpersonal relationships with family
- Quarrelsome with husbands and sexual rejection of them
- Family problems
- Harangue about and to husbands
- Does not communicate with spouse

#### Responses relating to physical symptoms and appearance:

- Tremors and delirium tremens — 2
- Malnourishment — 2
- Lack of appetite
- Poor eating habits
- Cirrhosis of the liver
- Multiple physical complaints
- Distinctive body odor
- Face flushed, red eyes — 2
- Slovenly — 2
- Unclean — 2

Good personal hygiene  
Poor personal hygiene  
Feminine type woman  
Dilated facial veins

#### Responses relating to reasons for use of alcohol:

Alcohol used as a method of handling anger  
Alcohol used to relieve tension or anxiety  
Men drink because of feelings of inadequacy  
Women don't drink socially because they are afraid of giving themselves away or afraid they will lose control  
To escape pressures of life  
For sedation

#### Responses relating to finances:

Financial problems associated with drinking  
Financially successful people

#### Responses relating to psychological make-up:

##### Dependency:

Seek recognition  
No determination or ambition  
Unsure of self  
Immaturity — 2  
Lack self-dependency  
Lack willpower  
Not self-sufficient or self-supporting — 2  
Great need to be liked and appreciated  
Inadequate personality in response to environment  
Oral dependent personality — 2  
Lack of self-control  
Easily irritated  
Lack insight — 3  
Want to borrow money and become belligerent if they cannot

##### Depression:

Inability to make decisions  
Lack of interest and drive — 2  
Self-pitying  
Frustrated and disappointed in themselves  
Guilty feelings intensified by drinking  
Suicidal tendencies  
Negativistic and pessimistic outlook, narrow scope of interest and activity, withdrawn in depth activities  
Depression which deepens as insight is gained  
Hate drinking and hate themselves for doing it

##### Character Disorder:

Selfish  
Evasive  
Smart, shrewed, crafty  
Dr. Jekyll, Mr. Hyde characters  
Passive-aggressive personalities — 2  
Psychopathic personalities — 2  
Psychopathic liars  
Sociopathic drinkers

Liars — 2  
Braggarts — 2  
Cheat  
Prevaricators  
Untrustworthy  
Sly, secretive, combative  
Beguiling  
Cannot tolerate success  
Subdued aggression  
Poor social adjustment  
Women alcoholics are dominant type married to submissive men

##### Neurotic Traits:

Possess inner unmet needs  
Suffer from anxiety neurosis — 2  
Neurotic compulsive drinkers  
Compulsive personality — 2  
Personal inadequacy and over-reaction to compensate  
Excessive in other areas as nibbling and smoking  
Obsessive-compulsion  
Hypercritical  
Complainers — 2  
Ritualistic  
People of habit  
Mood swings

##### Behavior Change:

Become more antagonistic  
Give up spiritual values  
Give up expressions of love — seductive when drunk, but give up sexual activities with mate  
Lose judgment, decency, morality  
Withdraw from social activities  
Critical evaluation of behavior is altered

##### Organic symptoms:

Forgetful — 2  
Deteriorated — 2  
Rambling talk  
Incoherent speech — 4

##### Desirable social characteristics:

Friendly — 8  
Capable, talented — 2  
Intelligent — 3  
Pleasant, successful when not drinking

##### Undesirable social characteristics:

Vulgar, crude  
Belligerent  
Hostile  
Unfriendly  
Angry, hateful, jealous  
Irrational  
Many broken appointments



|                                                                                                    |                                                               |
|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Other:                                                                                             | "They know that one drink won't hurt them"                    |
| Superficial — minimize their problem                                                               | Not too concerned about surroundings                          |
| Unable to display emotions                                                                         | Uncooperative as a hospital patient                           |
| Psychotic personalities                                                                            | Intolerant of advice and help until the problem is recognized |
| Belong to an occupational or social group who drink as bartenders, business associates and friends | Accident prone, repeated injuries                             |
| Phlegmatic                                                                                         | No follow through on statements about quitting drinking       |
| "Doctor hoppers"                                                                                   | Have difficulty with drinking and driving                     |
| "Mad at the world"                                                                                 | Inherited tendency toward alcoholism                          |

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Coarctation of the aorta is suspected, particularly in children or young adults with hypertension. Palpation of the femoral pulses should be carried out routinely in hypertensive patients. If the pulses are full and bounding, coarctation of the aorta can practically be ruled out. If the pulses are not full, further examination is indicated . . . (From Modern Concepts of Cardiovascular Disease, October, 1963).

## Coming Meetings

### CRIPPLED CHILDREN'S CLINICS—

- July 10 — Chadron, Elks Club
- July 24 — Ogallala, Elks Club
- August 7 — Broken Bow, Elks Club
- August 14 — O'Neill, High School Building
- August 28 — Scottsbluff, St. Mary's Hospital

**MEDICAL ASPECT OF SPORTS** — The fourth annual Postgraduate Conference on the Medical Aspect of Sports will be held on August 19 and 20, 1965, at the University of Rhode Island Keaney Gymnasium.

**COMPETITIVE ATHLETICS** — Third annual seminar on the medical aspects of competitive athletics, August 20 and 21, 1965, Hotel Cornhusker, Lincoln, Nebraska. Additional information may be obtained from the Nebraska State Medical Association, 1315 Sharp Building, Lincoln, Nebraska.

### FLYING PHYSICIANS' ASSOCIATION—

The Flying Physicians' Association will hold its eleventh annual meeting at the Deauville Hotel in Miami Beach, from August 22 to 27, inclusive. Dwaine J. Peetz, MD, of Neligh, is chairman of the Nebraska Chapter. The national society now has more than 1700 members.

**THE ANNUAL MEETING OF THE AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION** — Will be held on August 22-27, 1965, at the Sheraton Hotel, in Philadelphia.

**AMERICAN ASSOCIATION OF BLOOD BANKS** — 18th annual meeting; Americana Hotel, Bal Harbour, Florida, September 14-17. Info: The Association at 30 North Michigan Ave., Chicago 2.

### OCCUPATIONAL HEALTH CONGRESS—

The 1965 Congress on Occupational Health, sponsored annually by the AMA Council on Occupational Health, will

be held concurrently with the Indiana State Medical Association's annual convention. The meeting will take place at the Murat Temple in Indianapolis, October 12-14. Additional information may be obtained from: Department of Occupational Health, AMA, 535 North Dearborn Street, Chicago, Illinois 60610; or from the Indiana State Medical Association, 3935 North Meridian Street, Indianapolis, Indiana 46208.

**ANNUAL MEETING OF ARTERIOSCLEROSIS COUNCIL** — The Council on Arteriosclerosis of the American Heart Association will hold its annual meeting at the Hotel Deauville, Bal Harbour, Florida, on October 13 and 14. Write to the American Heart Association, 44 East 23rd Street, New York, NY 10010.

### AMERICAN HEART ASSOCIATION —

The (38th) annual Scientific Sessions of the American Heart Association will be held October 15-17, 1965 at the Hotel Americana, Bal Harbour, Florida. There will be six programs on clinical cardiology and simultaneous sessions on specialized cardiovascular subjects. Write to local Heart Associations or to the AHA national office, 44 East 23rd Street, New York, NY, 10010.

**DISASTER MEDICAL CARE** — The 16th National Conference on Disaster Medical Care will be held at the Drake Hotel in Chicago, October 30 - 31. Information: Council of National Security, AMA, 535 North Dearborn Street, Chicago, Illinois 60610.

**1965 POSTGRADUATE COURSES SPONSORED BY THE AMERICAN COLLEGE OF CHEST PHYSICIANS** — Clinical application of cardiopulmonary physiology: Knickerbocker Hotel, Chicago, October 18-22. Diagnosis and treatment of diseases of the heart and lungs: Barbizon Plaza Hotel, New York City, November 15-19. What's new in the diagnosis and treatment of cardiovascular and pulmonary diseases: Fountainebleau Hotel, Miami Beach, January 24-28, 1966. Clinical application

of cardiopulmonary physiology: Ambassador Hotel, Los Angeles, February 14-18, 1966. Cine-angiographic techniques in cardiovascular diseases: Cleveland Clinic, Cleveland, April 11-13. Write to: American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

**THE OMAHA MID-WEST CLINICAL SOCIETY'S 33rd ANNUAL FOUR-DAY POSTGRADUATE ASSEMBLY** — Will convene in the Civic Auditorium, October 25, 26, 27 and 28. This program is acceptable for 32 accredited hours by the American Academy of General Practice.

**ANNUAL OTOLARYNGOLOGIC ASSEMBLY of 1965** — Will be held October 30 through November 5, in the new Illinois Eye and Ear Infirmary at the Medical Center, Chicago. The Department of Otolaryngology of the University of Illinois College of Medicine offers a condensed postgraduate basic and clinical program for practicing otolaryngologists under the direction of Doctor Emanuel M. Skolnik. It is designed to bring to the specialists current information in medical and surgical otorhinolaryngology. Info: Department of Otolaryngology, College of Medicine of the University of Illinois at the Medical Center, Chicago Box 6998, Chicago, Illinois 60680.

**FIRST NATIONAL CONFERENCE ON AREAWIDE HEALTH FACILITIES PLANNING, AMA** — Americana Hotel, Bal Harbour, Florida, November 28-29, 1965.

Future Meetings of the American College of Surgeons—

**ANNUAL CLINICAL CONGRESS**, October 18-22, 1965, Atlantic City, New Jersey.

— 1966 —

**BAL HARBOUR, FLORIDA**, January 13-15. Sectional Meeting. Americana Hotel.

**HOUSTON, TEXAS**, January 31 - February 2. Sectional Meeting. Sheraton-Lincoln Hotel.

**CLEVELAND, OHIO**, March 14-17. Annual 4-Day Sectional Meeting for Doctors and

Graduate Nurses. Sheraton-Cleveland and nearby hotels.

**ANNUAL CLINICAL CONGRESS**, October 10-14, 1966. San Francisco, California.

For any advance information address: Secretary, American College of Surgeons, 55 East Erie Street, Chicago, Illinois 60611.

**THE HAHNEMAN MEDICAL COLLEGE AND HOSPITAL** of Philadelphia offers the following Postgraduate Education Courses during 1965 and 1966:

—July 26-30, 1965: Interpretation and Therapy of Cardiac Arrhythmias; Dr. Dreifus; Hahneman CVI Building.

—November 22-24, 1965; 15th Hahneman Symposium Cancer Chemotherapy; Dr. Isadore Brodsky; Sheraton Hotel.

—December 8-10, 1965: A Hahneman Symposium on New Concepts in Gynecological Oncology; Dr. George C. Lewis; Sheraton Hotel.

—April 20-23, 1966: 16th Hahneman Symposium, Arterial Occlusive Disease; Dr. Albert N. Brest; Marriott Motor Hotel.

—December, 1966: 17th Hahneman Symposium, Nutritional Dysfunction; Dr. Donald Berkowitz; Sheraton Hotel, Philadelphia.

**ANIMAL CARE PANEL** — 16th Annual Meeting; Sheraton Hotel, Philadelphia; November 15-19, 1965. Contact Mr. Joseph J. Garvey, Executive Secretary, 4 East Clinton Street, Joliet, Illinois 60434.

**SECOND NATIONAL SYMPOSIUM ON COCCIDIOIDOMYCOSIS** — December 8-9-10, 1965, Del E. Webb Towne House, Phoenix, Arizona. For further information, contact: Arizona Tuberculosis and Health Association, Inc., 733 West McDowell Road, Phoenix, Arizona 85007.

**CONTINUING EDUCATION** — Closed Chest Resuscitation; University of Nebraska College of Medicine, at Eppley Research Institute, March 8, 1966 (for physicians, 9th for dentists, and 10th for nurses).



Info: Continuing Education, University of Nebraska College of Medicine, 42nd and Dewey, Omaha 5.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS — "Vision for the Space Age;" Houston, Texas, Rice Hotel, March 24-26, 1966. Info: Director of Information John D. Coleman, 16 East 40th Street, New York 10016.



## Know Your Blue Shield Plan

### Retrospect and Introspect—

In searching for answers to our national dilemma, one can't help but remember some excerpts from Dr. Arthur J. Offerman's Presidential Address to the North Central Medical Conference held in Minneapolis on November 22, 1959.

Dr. Offerman said, "We must never forget that the public interest comes first, and if we faithfully serve the public interest, our own interest will be adequately served."

He further stated, "Freedom is not free, and we must continue to make sacrifices of our own time, energy and convenience, if we are to preserve our freedoms as we have known them.

"The future of medical care, as we know it today, will depend in large measure on the degree to which the medical profession is capable of exercising medical statesmanship, and promoting active leadership to provide constructive and practical answers to the changing social economic problems of our times. The future of medicine depends on the firm and fixed resolve by doctors to solve their own problems, keeping in mind that the public interest comes first.

"Service benefits or 'paid in full' benefits are a major attraction of Blue Shield in the eyes of the subscribing public, and constitute one of the chief factors in the fantastic growth of Blue Shield enrollment."

Dr. Offerman continued, "The motivation and philosophy of Blue Shield has been to provide its subscribers with *adequate* coverage, at a price they can afford to pay; and the key word is *adequate*."

He then predicted, "The proponents of compulsory health insurance — state socialized medicine — are more active and energetic than ever. This is no time for complacency; the doubter need only recall the recent revisions of the Social Security Act by enactment of H.R. 7225, and the energetic attempts of the present Congress to make the Forand Bill a law of the land. The passage of the Forand type of legislation would put the Government in the insurance business and complete socialization of the practice of medicine would be a reality in the very near future.

"What can we as individuals do about this tremendously important and complex problem? The individual doctor can actively support the local Blue Shield Plan and other *adequate* voluntary insurance plans; note the key word — *adequate*."

Dr. Offerman explained that, "It is our desire to furnish to the people who need it the quality and quantity of medical care to which any American may aspire, at a price within their means. We must do this under policies formulated and approved by doctors of medicine and with no governmental interference. We are in the insurance business at no profit as measured in dollars and cents. Our recompense is the accomplishment of the aim stated above as free physicians and with no third-party interference."

He closed his address by quoting from an article in the Nebraska State Medical Journal by Dr. Louis Bauer, a past President of the American Medical Association, "If the doctors desire a fee-of-service, free choice doctor plan, and want it to compete successfully with other plans, they had better stand directly behind their own plan, control it, see that it meets the needs of the community. Competition usually affords stimulation, often progress, but, one does not compete against oneself. In the last analysis, we are all competing against government-

run medicine, and we need united strength because the enemy is formidable. And, finally, if we are to attain our goals, we must chart our course by the fixed stars of community service, and not by the moving lights on the shores of materialistic expediency."

Yesterday's projections are today's facts. Today's blue-prints become tomorrow's structure.

## Medicare in Operation

### Basis for Payment for Elective Procedures Under the Medicare Program—

Surgical procedures marked "E" in the Medicare Manual normally are not considered allowable under the Program. However, they may be considered allowable if they meet with the following requirements:

"... when the surgical procedures are medically indicated, are not elective, and not performed solely upon the request of the patient or for cosmetic purposes. Before these procedures are performed, if compensation is expected under the Program, the physician should assure himself that a medical need for the procedure exists, such as: emergency, bleeding, ulceration, suspected malignancy, relief of pain, or necessary restoration of impaired function of life or limb.

Examples of care not covered under the Program are: elective procedures, such as cosmetic operations on ears or nose; removal of well-healed scars; plastic procedures for improvement of appearances; and procedures for sterility influences on otherwise physically well persons. Physicians are encouraged to request advance approval of questionable coverage by writing to the Fiscal Administrator. In all instances where a surgical procedure marked "E" is performed, the physician must adequately explain on his claim for compensation (DA Form 1863) or in separate attached correspondence, why the procedure was medically indicated."

## Announcements

### Awards at AMA Convention in New York—

Awards to be made during the 114th annual AMA convention in New York will include the Scientific Achievement Award, the Distinguished Award, and the Goldberger Award in Clinical Nutrition. The Scientific Achievement Award was established for non-physician scientists who have contributed to medicine. Previous winners have included biochemist Donald D. Van Slyke, PhD, virologist John F. Enders, PhD, and microbiologist Rene Jules Dubos, PhD.

### New Name for AMA Division—

The AMA has announced a change in name of the Division of Environmental Medicine and Medical Services to Division of Socio-Economic Activities. This Division includes the Department of Biostatistics, Community Health and Health Education, Economics, Environmental Health, Governmental Medical Services, Hospitals and Medical Facilities, and Occupational Health.

### New Advisors for AMA Biomedical Research Institute—

Two scientists were named to the Committee of Scientific Advisors of the AMA-ERF Institute for Biomedical Research: Hudson Hoagland, PhD, executive director of the Worcester Foundation for Experimental Biology, and Severo Ochoa, MD, 1959 co-winner of the Nobel Prize for medicine and physiology.

### Course in Laryngology and Bronchoesophagology—

The Department of Otolaryngology, College of Medicine of the University of Illinois at the Medical Center, Chicago, will conduct a postgraduate course in Laryngology and Bronchoesophagology from September 20 to October 2, 1965. This course is limited to fifteen physicians, and will be under the direction of Paul H. Holinger, MD. It will be held at the new Illinois Eye and Ear Infirmary, 1885 West Taylor Street, Chicago. Instruction will be provided by means of animal demonstrations, and practice in bronchoscopy and esophagoscopy, diagnos-



tic and surgical clinics, as well as didactic lectures.

Interested registrants will please write directly to the Department of Otolaryngology, College of Medicine of the University of Illinois at the Medical Center, Postoffice Box 6998, Chicago, Illinois 60680.

#### New President of American Federation For Clinical Research—

The American Federation for Clinical Research is the largest society of physicians in the U.S. engaged in research and teaching.

#### Grand Award Prize to Nebraska Student—

Howard E. Hagglund (right), a senior medical student at the University of Nebraska College of Medicine, was the Grand Award winner in the Medical Student Division of the SAMA-Squibb Scientific Award Program held recently at the Student American Medical Association's 15th annual convention in Chicago. As winner, he received a check for \$150, a gold medal and an expense-paid trip to show his exhibit at the American Medical Association's annual convention being held in New York in June.

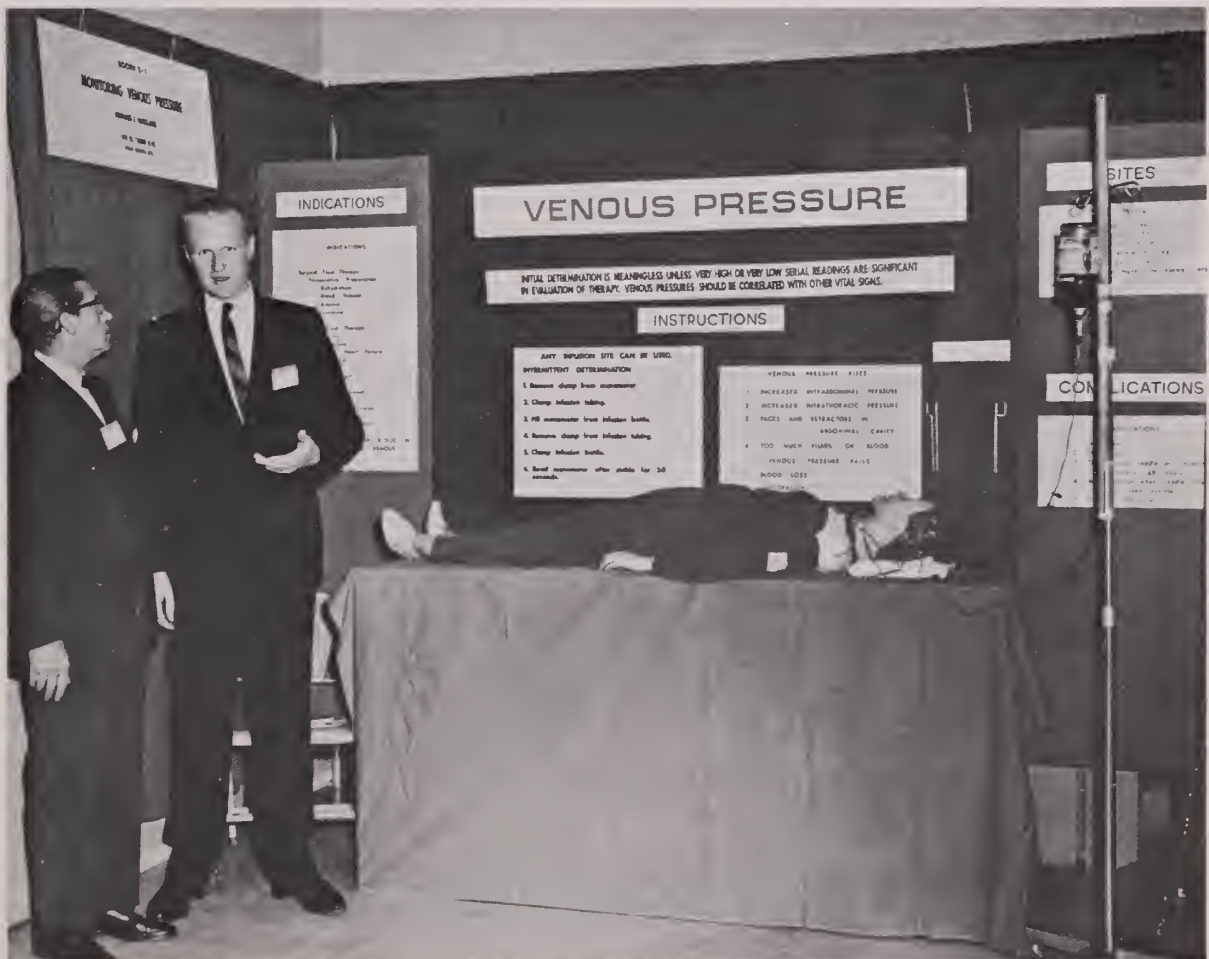
During its May 2, 1965 annual national meeting, held in Atlantic City, Dr. Richard J. Havel, Associate Professor of Medicine at the University of California School of Medicine, San Francisco, California, became the Federation's 25th president.

#### Diabetes in the Tropics—

The World Congress on Diabetes in the Tropics announces a conference on Diabetes in the Tropics to be held in Bombay from January 20 to January 22, 1966. Abstracts of articles must reach the organizing

Here, Mr. Hagglund discusses his winning exhibit, "Monitoring Venous Pressure," with Howard W. Baldock, director of medical relations for E. R. Squibb & Sons.

The program is sponsored annually by E. R. Squibb & Sons with the cooperation of the Student American Medical Association. It was created to present the medical student and the young physician with an opportunity to report on the research and investigation in which most of them are now engaged.





Secretary by October 15, 1965. For additional information, write to the Organizing Secretary, World Congress on Diabetes in the Tropics, care Diabetic Association of India, Maneckji Wadia Bldg., Mahatma Gandhi Road, Bombay 1.

#### New Tobacco Research Grants—

Fifteen new tobacco research grants have been awarded by the AMA-ERF Committee on Tobacco and Health. First-year grants totaled more than \$474,000, length of the programs go from one to five years, and commitment for the duration will exceed \$1,280,000. This brings the number of tobacco research projects currently receiving financial support from the AMA-ERF to forty-three, with a total first-year commitment of approximately \$1,500,000 and a five-year potential expenditure of more than \$3,600,000.

#### P.M.A. Establishes New Foundation—

The Pharmaceutical Manufacturers have established a Foundation "to promote the public health through scientific and medical research." The headquarters of the Foundation are in the Washington offices of the PMA; Dr. Austin Smith is president and chief executive officer. One possible foundation activity is joint sponsorship with the AMA and the FDA of the new Registry for Tissue Reaction to Drugs recently established at the Armed Forces Institute of Pathology.

## Doctors in the News

#### New Editor for Cardiovascular Journal—

Edward S. Orgain, MD, Professor of Internal Medicine at Duke University, will be the new editor of *Modern Concepts of Cardiovascular Disease*, beginning with the January, 1966 issue. This is one of four professional periodicals published by the American Heart Association.

## News and Views

#### Birth Defects—

A Rubella Birth Defect Evaluation Project has been established at New York University Medical Center with the aid of a

grant from the New York Chapter of the National Foundation March of Dimes. In addition, 51 Birth Defects Centers have been established in this country with March of Dimes aid. The New York Chapter also supports a Birth Defects Treatment Center at New York Hospital - Cornell Medical Center.

#### Insurance Problems of Epilepsy Patients—

A new study of life and health insurance problems of epilepsy patients has recently been prepared by Robert D. Eilers, PhD, and Joseph J. Melone, PhD, of the Wharton School of Finance and Commerce, University of Pennsylvania, and sponsored by the Epilepsy Foundation, of Washington, D.C. While most of this country's two million epileptics lead nearly normal lives because of medical progress, it is still difficult for them to obtain life and health insurance. The study concludes: (1) coverage is available, although usually at substandard rates; (2) there are variations in coverage, depending on the severity of the disease; (3) different companies charge different rates; (4) accurate information is important; (5) a hopeful sign is the recognition by many companies that even two or three year old underwriting manuals may be outdated regarding epilepsy; and (6) group coverage is less expensive and is therefore strongly recommended.

#### New Directory of Health Organizations—

"Health Organizations of the United States, Canada, and Internationally," Second Edition, has just been published by the Graduate School of Business and Public Administration at Cornell University. It is available from the Public Section of the Graduate School of Business and Public Administration, Cornell University, Ithaca, New York.

#### How to Succeed As An Occasional Athlete—

The AMA and the National Federation of State Athletic Associations offer hot weather tips for athletes in a pamphlet entitled "Tips on Training," said to be especially applicable to the many American week-end athletes.

#### Medical Licensure—

The number of physicians newly added to the licensed medical profession in the U.S. during 1964 totaled 7911. Of these, 6605 were U.S. and Canadian medical school graduates, while 1306 were graduates of medical schools in other countries. Newly licensed foreign medical graduates reached their high of 1626 in 1959.

There were 1181 licensing board examination failures during 1964. The percentage of failures in written examinations was 1.7 for graduates of approved U.S. medical schools; it was 7.8 for approved Canadian medical schools, 9.4 for schools of osteopathy, 31.8 for foreign-trained physicians, and 13.4 for all, approximately the same as it was in 1963.

#### A Disposable Sigmoidoscope—

A disposable sigmoidoscope is now available from the Smith Kline Instrument Company. Two light systems are made for use with the disposable components. The disposable parts cost between 72 and 95 cents.

#### Report on NegGram's Antibacterial Spectrum—

A Canadian investigator (Reese, L., University of West Ontario) reports (*Canad Med Ass J* 92:394, 1965) the eradication of gram-negative organisms by NegGram in 57 of 61 patients with various urinary tract infections; the infection was cured in 42 patients. "Few complications" were attributed to the drug.

#### Advances in Blood Preservation—

Charles E. Huggins, MD and M. Grove-Rasmussen, MD have described a system to arrest the aging of human red blood cells and permit the long-term preservation of blood for transfusion. Doctor Huggins is Director of the Blood Bank and Transfusion Service of the Massachusetts General Hospital in Boston.

The changes which occur in human red blood cells and plasma in long-term preservation of blood for transfusion have long presented a problem. The method described employs an endocellular cryophylactic agent

to protect the cells and arrest their aging during freezing, storage, and thawing. Thawed cells are washed by dilution with sugar solution and "reversible agglomeration" with removal of extraneous substances occurs. Low titers of anti-A and anti-B antibodies in the resuspended frozen blood make it possible to use specially selected group "O" blood for all recipients.

The concept of specific donor selection by statistical need may modify or replace the generally accepted practice of random collection for random need. (*Postgraduate Medicine*, May, 1965).

#### Hormones and Genes—

One of the traditional questions of biology is: How do hormones exert their powerful effects on cells? Evidence is accumulating that many of these effects are due to the activation of genes. In the living cell the activities of life proceed under the direction of the genes. In a many-celled organism the cells are marshaled in tissues, and in order for each tissue to perform its role its cells must function in a cooperative manner. For more than a century biologists have studied the ways in which tissue functions are controlled, providing the organism with the flexibility it needs to adapt to a changing environment. Gradually it has become clear that among the primary controllers are the hormones. Thus whereas the genes control the activities of individual cells, these same cells constitute the tissues that respond to the influence of hormones.

New experimental evidence is now proving that hormones can affect the activity of genes. The establishment of this link completes a conceptual bridge stretching from the molecular level to ecology and animal behavior. (*Scientific American*, June, 1965)

#### Ultrasonic Therapy

In medical ultrasound therapy, the effect is primarily the production of heat deep in tissues. If ultrasound is improperly applied, or too high a dosage is used, it can cause destruction of the skin and underlying tissues. High dosages are, however, used in particular surgical procedures with some



success. There is considerable difference in the use of ultrasound for surgical and for medical disorders. In surgery, the dose power is many times that used in medical disorders. In surgery, ultrasound is a means of providing controlled destruction of tissue, as in current trials in Meniere's disease, and in the treatment of keloids, plan-tar warts and post-amputation neuromas.

The value of treatment with ultrasound is subject to the same pitfalls interpretation as treatment with drugs. Devices such as ultrasound require the same controls as drugs to avoid the effects of physician bias and patient suggestibility and mistake of attributing spontaneous remission to the use of a device or a drug. The usefulness of ultrasound in any medical disorder has yet to be proved. (The Medical Letter, 23 April 1965).

## Human Interest Tales

Doctor Elliott Rustad, Lincoln, spoke on skin problems of teenagers at the DeWitt Clinic in April.

Doctor Frederick F. Paustian, Omaha, has been elected a fellow of the American College of Physicians.

Doctor E. E. Yaw, Imperial, has been appointed medical advisor of the Chase County Selective Service.

Doctor Albert B. Lorincz, Omaha, presented a paper at a maternal and child health conference at Pierre, South Dakota, in May.

Doctors Francis M. Fitzmaurice and Richard J. Schain, Omaha, were elected fellows of the American Academy of Pediatrics during May.

Doctor Cecil L. Wittson, Omaha, was named a Life Fellow in the American Psychiatric Association at the organization's meeting in New York City.

Thomas A. Merrick, son of Doctor and Mrs. A. J. Merrick, Fremont, has been elected president of the 1965-66 senior class of the University of Nebraska College of Medicine.

Doctor J. L. Dyer, North Bend, attended the Annual Scientific Assembly of the American Academy of General Practice in San Francisco in late April.

Doctor Abe Greenberg, Omaha, was presented the National Brotherhood Award of the National Conference of Christians and Jews at a banquet in May.

Doctors Theodore L. Perrin and Robert J. Luby, Omaha, have been initiated into Alpha Omega Alpha, medical honor society at the Creighton University School of Medicine.

## PROCEEDINGS of the HOUSE OF DELEGATES

### Nebraska State Medical Association

#### First Session, April 26, 1965

The first session of the House of Delegates was held at the Sheraton-Fontenelle Hotel, Omaha, Nebraska, April 26, 1965. The meeting was called to order by the Speaker of the House, Dr. Wm. Nutzman.

A report of the Credential Committee showed 43 delegates were present, and the meeting was declared in session.

The Speaker called for approval of the minutes of the mid-winter session, and it was moved and seconded that these minutes be accepted as printed in the April, 1965, issue of the Journal. The motion carried.

Dr. Nutzman read the Reference Committee appointments and called for a motion to approve these. It was moved and seconded that these appointments be accepted, and the motion carried.

Following a short recess, the following Nominating Committee was selected: 1st District — A. Lempka, MD, Omaha; 2nd District — Paul Maxwell, MD, Lincoln; 3rd District—Paul Scott, MD, Auburn; 4th District — Stanley Neil, MD, Niobrara; 5th District — Robert Burns, MD, Columbus; 6th District — H. Steenburg, MD, Aurora; 7th District — H. V. Nuss, MD, Sutton; 8th District — A. J. Alderman, MD, Chadron; 9th District — P. B. Olssen, MD, Lexington; 10th District — H. McConahay, MD, Holdrege; 11th District — Bruce Claussen, MD, North Platte; and 12th District—Carl Frank, MD, Scottsbluff.

The report of the Building Committee was called for and Dr. Garlinghouse, Chairman, presented the following report:

The Building Committee has met and reviewed the results of the state-wide survey on a permanent headquarters building.

Due to the fact that 40% of the returns received were opposed to such a building, the Building Committee recommends that no fur-



ther action be taken on this proposal at this time.

The Committee further recommends that the Interim Building Committee be retained and that this Committee continue to pursue information relative to such a building and present informational reports at future meetings of the House of Delegates.

This report was referred to Reference Committee No. 1.

Dr. Scott was granted permission of the floor and read the following resolution from the Nemaha County Medical Society:

WHEREAS, Dr. I. W. Irvin of Auburn, Nebraska, on the occasion of his 60th anniversary of service in his 89th year of life; and,

WHEREAS, Dr. Irvin has served his patients and his community with resourcefulness and faithfulness of service.

BE IT RESOLVED, that the Nebraska State Medical Association shall duly recognize this 60th year of service as physician and surgeon in Nebraska and his dedication to the principles of his profession; and,

BE IT FURTHER RESOLVED, that a letter be sent to Dr. Irvin stating the above and that he appropriately be recognized at the Annual Banquet.

The Speaker called for acceptance of this resolution, and the motion was made and seconded to approve this and the motion carried.

Dr. Rogers was granted permission of the floor and discussed the proposed regulations several years ago which would require that two surgeons be present at all major surgery. He said that it was the recommendation of the House of Delegates that this not be required.

The report of the Relative Value Study Committee was called for, and Dr. Bancroft, Chairman, presented the following report:

Your Committee is now in the process of revising and upgrading the Relative Value Study originally compiled in 1961. Revision is considered particularly important at this time because of anticipated negotiation in connection with Social Security Amendments of 1965 and Medicare, with whom our present contract expires in October of this year. There has resulted an approximate increase in unit values of approximately 20%. Some sections of the new Study are already at the printers and we hope the others will soon follow. These revisions have been done by committees representing each division of the Study under the supervision of this committee and will be reviewed, perhaps twice more by the concerned specialty groups and this committee.

It is hoped that the revised Relative Value Study may be in the hands of the members of the state society July 15, 1965, if at all possible. The estimated cost of printing 5000 copies of this study is \$4000, which, incidentally, is not included in the budget.

Your committee makes the following recommendations:

1. That the Relative Value Study Committee of the Nebraska State Medical Association

be authorized to revise the 1961 Relative Value Study.

2. That the expenditure of monies sufficient to complete the 1965 revision of the Relative Value Study, estimated at \$4000, be authorized.
3. That the Policy Committee be designated the negotiating committee for Social Security Amendments of 1965 and Medicare with the following serving in a consulting capacity:  
Chairman of the Relative Value Study Committee  
Speaker of the House  
Chairman of the Council  
President of Nebraska Blue Shield  
Chairman of the Board of Trustees
4. That the Relative Value Study Committee be designated the negotiating committee for welfare, old age assistance, Kerr-Mills and compensation court.
5. That a conversion factor of 5 be insisted upon in all negotiations.

This report was referred to Reference Committee No. 2.

The report of the Ad Hoc Committee to Study Malpractice Insurance was called for, and Dr. Fay Smith, Chairman, presented the following report:

This Committee was created one year ago to study the question of our malpractice insurance and directed to report to you at this session.

Your committee, together with your President, has held three local meetings and one in St. Paul, Minn. Your Chairman also conducted a survey of all the State Medical Associations and their experiences have been used in this report.

It is our opinion that the best malpractice policy now available and the only one that we could find with no exclusions is the one written by The St. Paul Fire and Marine Insurance Co., of St. Paul, Minn.

A conference was held with Mr. J. M. Campbell, Assistant Manager of St. Paul Fire and Marine Ins. Co. in St. Paul, Minn. Another was held yesterday with Mr. D. L. Clifford, Manager of the General and Professional Liability Dept. of the Home Office of St. Paul Fire and Marine Ins. Co.

Briefly, the reasons for making the recommendations which we will make are:

1. This type of contract gives us an opportunity to have some measure of control over our malpractice insurance whereas in the past this has not been true.
2. We will have a close working arrangement between the Nebraska State Medical Association and the Insurance Carrier.
3. We can now assure our members of adequate coverage with a policy which has no exclusions.
4. As the Company accumulates experience records, the premium will be lowered if those records indicate it is justifiable using only the records of our Nebraska members.
5. This Company will carry on an effective

educational program for our members which should reduce the number of suits and threats of suits.

It should be noted also that there has been a 10% increase in the premium rates recently. Also it is a fact that where the settlement of cases a few years ago was in four figures, they are now in five figures. Another point of interest is that the Nebraska State Medical Association has no funds with which to help one of its members in the event of a suit or a threat.

It is also worthy of note that 14 States have already entered into this type of arrangement with the St. Paul Fire and Marine Co. We found no other such arrangement when we studied the other states.

As a result of our studies, we recommend the following to you:

1. The Nebraska State Medical Association endorse the malpractice policy written by the St. Paul Fire and Marine Ins. Co.
2. The Nebraska State Medical Association establish a Medical Advisory Committee to work with the St. Paul Fire and Marine Ins. Co., or any other carrier of its members' malpractice insurance.
3. The Policy Committee of the Nebraska State Medical Association shall appoint the members of the Medical Advisory Committee and shall also determine the number and the term of office of the members.
4. The Medical Advisory Committee shall meet annually with the St. Paul Fire and Marine Ins. Co. and at any other time that necessity may indicate. They shall be available to any other carrier of our members' malpractice insurance if they be called upon by the carrier, the policy holder, or their attorneys.
5. The House of Delegates directs that our Executive Secretary take the necessary steps to implement this program promptly.

This report was referred to Reference Committee No. 4.

The report of the Maternal and Child Health Committee was called for, and Dr. Bosley, Chairman, stated that he had attended a meeting on the Retarded Child in Des Moines, Iowa. At this time a meeting was set up on the Retarded Child to be held in Omaha, Nebraska; and the Nebraska State Medical Association was being asked to help sponsor this program. This would be without any cost to the Association. Dr. Bosley recommended that we assist in sponsoring this meeting. He also stated that the Maternal and Child Health Committee would like to change their recommendation made at the mid-winter meeting relative to making the Nebraska Directory of Services for Children and Youth available to members of the Association. He stated that in view of the expense involved on the part of the Association in making this available to its members, that this committee recommends that all members be informed of the availability of this Directory and how they may obtain this.

This report was referred to Reference Committee No. 5.

The Speaker called for resolutions from the floor and the following were presented:

**Resolution: Omaha-Douglas County Medical Society — Introduced by Dr. McMurtrey**

WHEREAS, at the recent mid-winter session of the House of Delegates of the Nebraska State Medical Association, there was presented, along with other reports, the Planning Committee report, the major portion of which included a proposal for a permanent headquarters building with a total cost in excess of \$100,000; and,

WHEREAS, it is the official position of the officers and members of the Omaha-Douglas County Medical Society that the undertaking of such a project would be unwise at this time,

THEREFORE, BE IT RESOLVED, that the Omaha-Douglas County Medical Society go on record as officially opposing such a project at this time, and

FURTHER BE IT RESOLVED, that this resolution be presented to the annual session of the House of Delegates of the Nebraska State Medical Association to be held April 26, 1965.

This resolution was referred to Reference Committee No. 1.

**Resolution: Adams County Medical Society — Introduced by Dr. Landgraf**

WHEREAS: The Nebraska State Hospitals are an essential part of the treatment of mentally ill persons in this state, especially the treatment of those persons unable to assume the cost of private care; and the need for such facilities will continue to exist indefinitely; and

WHEREAS: The people of Nebraska demand that the treatment provided in their State Hospitals be of the highest caliber possible; and such treatment requires medical, nursing, and administrative personnel of great ability; and

WHEREAS: In recent years, and especially in the past few years, the quality of treatment in State Hospitals in Nebraska has deteriorated seriously; and administration at the state level has been unrealistic and uninformed and has shown serious lack of understanding of the problems involved; and many of those individuals who are responsible at the state level are without proper training, experience and motivation for their positions; and

WHEREAS: The existing organization for administration of the state medical facilities is unwieldy, inefficient, and subject unduly to political pressure of an undesirable type; and

WHEREAS: Efforts are underway to remove administration of state medical facilities from medical supervision and to place it more directly under lay direction; and the American Psychiatric Association is on record stating that the chief officer of psychiatric facilities should be an appropriately qualified physician and should be the chief professional and administrative officer of a medical facility; now, therefore, be it

RESOLVED: That every conceivable practical effort be made by those responsible to improve



the quality of care and treatment in the state medical facilities; and be it further

RESOLVED: That each member of the medical (except residents in training) and nursing (except nursing students in training) staffs meet the same qualifications as required for membership on the staffs of any other hospital in the state concerning personal stability, training and licensure; and be it further

RESOLVED: That any procedure likely to result in the state medical facilities becoming custodial institutions vigorously be opposed and rejected; and be it further

RESOLVED: That further removal of state medical facilities from direct medical control by appointment of lay administrators be opposed; and that the chief executive officer of each state medical facility shall be an appropriately qualified and experienced physician; and be it further

RESOLVED: That complete reorganization is urged of that portion of state government concerned with the operation of state medical institutions, excepting the University of Nebraska, in order to remove them from undue political influence and in order to achieve more efficient administration and to return them to medical control; and be it further

RESOLVED: That the Nebraska State Legislature consider reorganization of that portion of state government concerned with the above institutions, and that the responsibilities of the Department of Institutions as presently are concerned with the operation of medical facilities be placed in the Department of Health, and that an appropriate Division in the Department of Health be created to assume such responsibilities; and be it further

RESOLVED: That the Legislature further consider that such Division be administered by a career appointee who shall be an appropriately qualified and experienced physician; and that such Division Chief be directly responsible to the Director of the Department of Health and be an ex-officio member of the Board of Health; and be it further

RESOLVED: That consideration be given to increasing the present Board of Health Membership by one, which additional member shall not be an employee of the State of Nebraska and shall be a qualified physician licensed to practice in Nebraska.

This resolution was referred to Reference Committee No. 6.

**Resolution: Lancaster County Medical Society — Introduced by Dr. Maxwell**

WHEREAS, the findings of the Nebraska Board of Examiners in Medicine and Surgery on inspection of the five osteopathic colleges in the United States; and

WHEREAS, after an exhaustive analysis of the questionnaires that were returned to the Inspection Team of these colleges; and

WHEREAS, after a careful on-the-spot inspection of the facilities of these five colleges which indicates that the quality of medical

education offered in these osteopathic schools in the United States does not meet the minimum standards that are obtained in the United States Medical Schools; and

WHEREAS, the Board feels that granting unlimited licenses to osteopaths would not relieve the shortage of general practitioners in the rural areas of Nebraska; and

WHEREAS, it is the consensus of this Board that osteopaths must meet the same standards of education and training as well as examination, to be awarded a license to practice medicine; and

WHEREAS, in view of the fact that it would be highly undesirable for the State to countenance two standards of medical education:

BE IT RESOLVED, that the Nebraska State Medical Association oppose any change in the medical practice act, or in the Osteopathic Practice Act which would grant osteopaths licenses to practice medicine.

It was moved by Dr. Landgraf that this resolution be accepted. This was seconded and carried.

**Resolution: Lancaster County Medical Society — Introduced by Dr. Frazer**

WHEREAS, James M. 'Mac' Woodward, MD, during his 50 years of medical practice has been an exemplary practitioner of the art; and

WHEREAS, this good and dedicated gentleman and physician has served organized medicine in an excellent manner, having served as President of the Lancaster County Medical Society in 1941, President of the Nebraska State Medical Association in 1955 and 1956, and as a member of the Board of Trustees of the Nebraska State Medical Association from 1958 to 1965;

BE IT HEREBY RESOLVED, that the Lancaster County Medical Society hereby recognizes Dr. Woodward's dedicated service by placing this resolution in the Society's archives and forwarding a copy of the same to him; and

BE IT FURTHER RESOLVED, that the Lancaster County Medical Society hereby places this resolution before the House of Delegates of the Nebraska State Medical Association at its 1965 Annual Meeting for their consideration of recognizing Dr. Woodward's dedicated service as President and Member of the Board of Trustees of the Association.

It was moved and seconded to adopt this resolution, and the motion carried. Dr. Nutzman asked that appropriate recognition be given Dr. Woodward at the Annual Banquet.

Mr. Neff was asked to review the current Legislation before the Unicameral of interest to medicine.

There being no further business, the meeting was adjourned until Wednesday morning.

**Second Session — April 28, 1965**

The second session of the House of Delegates was called to order on Wednesday, April 28, 1965, by the Speaker, Dr. Nutzman.

A report of the Credential Committee showed 47



delegates were present, and the House was declared in session.

The minutes of the first session were read by Dr. McFadden, Vice Speaker, and were approved as read.

Following the reading of the minutes of the first session of the Board of Councilors, it was moved and seconded that these be accepted. Motion carried.

Dr. Nutzman read the requests for Life Membership and asked for approval by the House. The motion was made and seconded to approve these requests, and the motion carried.

Reports of the Reference Committees were called for, and the following were presented:

**Reference Committee No. 1 — Dr. Landgraf, Chairman**

Other members of this committee were Drs. Steenburg and Dorwart.

This committee considered the recommendations of the Building Committee and the resolution of the Omaha-Douglas County Medical Society in regard to the proposed building program. President Garlinghouse appeared before the committee and his remarks were most helpful.

After deliberation upon the recommendations and the resolution and upon the fact that the poll of the NSMA membership produced responses from 1/3 of the membership and indicated approximately 60% support for the building program, this Reference Committee moves that the NSMA take no action toward purchase of property for construction of a headquarters building. I so move.

This was seconded and carried.

This committee further moves that a permanent Building Committee be created to consist of six members, including a Chairman, which members' appointments and terms of service shall be in the same manner as for all other permanent committees. I so move.

This was seconded and carried.

The committee further moves that such a Building Committee shall concern itself with continuous investigation of the feasibility of purchase and of financing the costs of purchase of property for, and construction and maintenance of a permanent NSMA Headquarters building. I so move.

This was seconded and carried.

Lastly, the committee moves the Building Committee to report to the House of Delegates its deliberations not less often than at each Annual Session. I so move.

This was seconded and carried.

I move the adoption of this entire report of Reference Committee No. 1.

This was seconded and carried.

**Reference Committee No. 2 — Dr. H. V. Smith, Chairman**

Other members of this committee were Drs. Maxwell and Ramsey.

This committee has considered the report

of the Relative Value Study Committee by Dr. Bancroft, and following are our recommendations:

1. We recommend that the House of Delegates go on record as authorizing the revision of the 1961 schedule and bringing it up to date. I so move.

This was seconded and carried.

2. We recommend that the final revisions of of the Relative Value Study be referred to the Policy Committee for adoption. I so move.

This was seconded and carried.

3. We recommend that the House of Delegates authorize the payment of expenses incurred in the preparation and printing of the New Relative Value Study. I so move.

This was seconded and carried.

4. We recommend that the Policy Committee be designated as the negotiating committee for Social Security Amendments of 1965 and Medicare. We further recommend that they be authorized to negotiate a schedule commensurate with the usual and customary fees for medical services. I so move.

This was seconded and carried.

5. We recommend that the Relative Value Study Committee be designated as the negotiating committee for Welfare, Old Age Assistance, Kerr-Mills and Compensation Court. We further recommend that they be authorized to negotiate a schedule commensurate with the usual and customary fees for medical services. I so move.

This was seconded and carried.

6. We recommend that the following group serve in a consulting capacity to both the Policy Committee and the Relative Value Study Committee:

Chairman, Relative Value Study Committee  
Speaker of House of Delegates  
Chairman, Board of Councilors  
President of the Nebraska Blue Shield  
Chairman, Board of Trustees

I so move.

This was seconded and carried.

This committee considered the resolution proposing New Blue Shield Series 90 Agreement, and it was felt to be a reasonable and desirable addition. We recommend that this resolution be approved by the House of Delegates. I so move.

This was seconded and carried.

**Reference Committee No. 5 — Dr. Andersen, Chairman**

Other members of this committee were Drs. Bosley and Gurnett.

The Iowa Association for Retarded Children and the Nebraska Association for Retarded Children are planning a joint meeting in Omaha, Nebraska for the parents of physically handicapped retarded children. The purpose of this meeting is to educate the par-

ents in the matter of home care of such children. The Maternal and Child Health Committee recommends that the Nebraska State Medical Association act as co-sponsors of this meeting. The Reference Committee approves this request. I so move.

The motion was seconded and carried.

The Maternal and Child Health Committee recommends that all members of the Nebraska State Medical Association be notified by means of the "Pink Sheet" news letter of the availability of the Directory of Services for Children and Youth which may be obtained from the Nebraska Committee for Children and Youth at the State Capitol Building for the nominal charge of \$1.50. The MCH Committee strongly encourages all physicians who might have a need for this type of information, to obtain this Directory. I so move.

This was seconded and carried.

I move that the entire report of Reference Committee No. 5 be adopted. The motion was seconded and carried.

#### Reference Committee No. 6 — Dr. Frank, Chairman.

Other members of this committee were Drs. Alderman and Peetz.

This committee considered the Adams County resolution. After extended hearings and deliberation, the committee recommends that it be revised into two separate resolutions as follows:

#### Resolution No. 1:

WHEREAS, the Nebraska State Hospitals are an essential part of the treatment of mentally ill persons in this state, especially the treatment of those persons unable to assume the cost of private care; and the need for such facilities will continue to exist indefinitely; and

WHEREAS, the people of Nebraska demand that the treatment provided in their State Hospitals be of the highest caliber possible; and such treatment requires medical, nursing, and administrative personnel of great ability; and

WHEREAS, efforts are underway to remove administration of state medical facilities from medical supervision and to place it more directly under lay direction; and the American Psychiatric Association is on record stating that the chief officer of psychiatric facilities should be an appropriately qualified physician and should be the chief professional and administrative officer of a medical facility; now, therefore, be it

RESOLVED, that removal of state medical facilities from direct medical control by appointment of lay administrators be vigorously opposed immediately; and that the chief executive officer of each state medical facility shall be an appropriately qualified and experienced physician.

#### Resolution No. 2:

WHEREAS, in recent years, and especially in the past few years, the quality of treatment in State Hospitals in Nebraska has deteriorated

seriously; and administration at the state level has been unrealistic and uninformed and has shown serious lack of understanding of the problems involved; and many of those individuals who are responsible at the state level are without proper training, experience and motivation for their positions; and

WHEREAS, the existing organization for administration of the state medical facilities is unwieldy, inefficient and subject unduly to political pressure of an undesirable type; now, therefore, be it

RESOLVED, that every conceivable practical effort be made by those responsible to improve the quality of care and treatment in the state medical facilities; and, be it further

RESOLVED, that each member of the medical (except residents in training) and nursing (except nursing students in training) staffs meet the same qualification as required for membership on the staffs of any other hospital in the state concerning personal stability, training and licensure; and, be it further

RESOLVED, that any procedure likely to result in the state medical facilities becoming custodial institutions vigorously be opposed and rejected; and, be it further

RESOLVED, that complete reorganization is urged of that portion of state government concerned with the operation of state medical institutions, excepting the University of Nebraska, in order to remove them from undue political influence and in order to achieve more efficient administration and to return them to medical control; and, be it further

RESOLVED, that the Nebraska State Legislature consider reorganization of that portion of state government concerned with the above institutions, and that the responsibilities of the Department of Institutions as presently are concerned with the operation of medical facilities be placed in the Department of Health, and that an appropriate Division in the Department of Health be created to assume such responsibilities; and, be it further

RESOLVED, that the Legislature further consider that such Division be administered by a career appointee who shall be an appropriately qualified and experienced physician; and that such Division Chief be directly responsible to the Director of the Department of Health; and, be it further

RESOLVED, that consideration be given to increasing the present Board of Health Membership by one, which additional member shall not be an employee of the State of Nebraska and shall be a qualified physician licensed to practice in Nebraska.

I move that these resolutions be accepted.

The motion was seconded and carried.

The Vice-Speaker asked the House for means of implementing these resolutions. Following discussion, Dr. Landgraf moved that copies be sent to the Governor. This motion was acceptable to the Reference Committee and the motion was seconded and carried. Dr. Landgraf further moved that copies of these resolutions also be sent to all State Senators. This was seconded and carried.



It was moved and seconded to accept the report of Reference Committee No. 6 and the motion carried.

Dr. Claussen was granted permission of the floor and moved that the mid-winter meeting of the House of Delegates again be held in Kearney, Nebraska. This was approved.

There being no further business, the meeting was adjourned until Thursday morning.

### Third Session — April 29, 1965

The third session of the House of Delegates was held April 29, 1965. The meeting was called to order by the Speaker, Dr. Nutzman.

A report of the Credential Committee showed that 32 delegates were present, and the meeting was in session.

Dr. Peyton Pratt, Chairman of the Nebraska AMPAC, was asked to give an oral report to the House. Dr. Pratt reviewed the activities of this organization over the past year, giving a financial report of income and how this money was used. He also suggested that AMPAC dues might be included with other dues on a regular statement and asked that this be considered by the House.

The Speaker called for any discussion on this suggestion, and it was moved by Dr. Frazer that AMPAC dues may be included in the dues paid to the state association. This was seconded, and following discussion was carried.

The minutes of the second session of the House of Delegates were read and approved.

The report of Reference Committee No. 4 was called for, and the following was presented by Dr. Egan, Chairman:

Other members of this committee were Drs. Harry and Claussen.

This committee has carefully considered the Report of the Ad Hoc Committee for the Study of Malpractice Insurance and the opinions expressed for and against the acceptance of this Ad Hoc Committee Report. This committee does not recommend approval of the Ad Hoc Committee Report. I so move.

This motion was seconded and carried.

Dr. M. E. Grier was granted permission of the floor and stated that as retiring Chairman of the Board of Trustees, we would like to present a matter for consideration by the House of Delegates. He stated that he would like to suggest that the State Association drop the compulsory dues in the American Medical Association and have it on a voluntary dues basis. He said he did not think there would be any great drop in AMA memberships by doing this. The following motion was made on behalf of the Board of Trustees: That the By-Laws of the Nebraska State Medical Association be amended as follows:

Chapter I, Section 1 — in the first sentence, place a period after the word, "societies," and delete the remainder of the sentence.

In line 4 of the same paragraph, delete the following words, "and of the American Medical Association."

Chapter I, Section 2, Line 3 — Place a period

after the word "Association" and delete the remainder of the sentence.

Chapter II Section 2, Paragraph 3 — Delete the words, "and American Medical Association."

This change is recommended to take effect as of January 1, 1966.

Following discussion, it was moved by Dr. Ramsey that this matter be referred to the Policy Committee for study, and that they report back to the House at the 1966 Mid-Winter Meeting. This was seconded and carried.

The report of the Nominating Committee was called for, and Dr. Nuss, Chairman, presented the following slate of officers:

President-elect-----Dan A. Nye, MD, Kearney

Vice President -----H. V. Nuss, MD, Sutton Delegate,

AMA -----Earl F. Leininger, MD, McCook Alternate Delegate,

AMA ----W. C. Kenner, MD, Nebraska City Speaker of

House -----Wm. Nutzman, MD, Kearney Vice-Speaker of

House ----Harry McFadden, Jr., MD, Omaha Councilors:

4th Dist. -----J. T. Keown, Jr., MD, Pender

9th Dist. -----H. V. Smith, MD, Kearney

10th Dist. -----L. S. McNeill, MD, Hastings

11th Dist. ----Max Raines, MD, North Platte

12th Dist. -----C. J. Cornelius, MD, Sidney

Delegate, North Central

Conference ----Paul J. Maxwell, MD, Lincoln

Board of Directors, Nebraska Medical Service:

John E. Courtney, M.D. -----Omaha

Clinton B. Dorwart, MD -----Sidney

Houghton F. Elias, MD -----Beatrice

Richard E. Garlinghouse, MD -----Lincoln

Howard B. Hunt, MD -----Omaha

H. A. Jakeman, MD -----Fremont

Harold N. Neu, MD -----Omaha

The Speaker called for nominations from the floor. There being none, it was moved that the nominations be closed and that a unanimous ballot be cast for the slate of officers presented by the Nominating Committee. This was seconded and carried.

Dr. Wright was then asked to present the president-elect and vice-president to the House of Delegates.

The Speaker asked that the House recognize Dr. Grier for his eight years of service on the Board of Trustees, two years of which he served as Chairman, and asked for a standing ovation for Dr. Grier.

Dr. Rogers was granted permission of the floor and said he would like to inform the House of the budget problem which faces the Board of Health. This is in relation to the TB program. The operation of the mobile chest X-ray unit is no longer eligible for federal funds, and if the X-ray units are to be continued, they will have to be operated on state funds alone. The original request for an appropriation was based on the assumption that federal aid would continue as in the past. Dr. Rogers stated that a letter was being sent to



Senator Marvel, Chairman of the Budget Committee, requesting the additional \$49,836 needed to carry out this X-ray program. He asked that members support this request.

Dr. Landgraf moved that the State Association support the request for an additional \$49,836, and that Senator Marvel be informed of this support. This was seconded and carried.

Dr. Nuss was granted permission of the floor and stated that Dr. George Covey, Editor of the Nebraska State Medical Journal had resigned, and in view of the fact that Dr. Covey has served as Editor of the Journal 13 years, it would be proper and fitting that a vote of thanks be presented to Dr. Covey, and that a plaque be presented as a symbol of appreciation for his long service. It was moved and seconded that this be done, and the motion carried.

Dr. Frazer was granted permission of the floor and extended an invitation to the Nebraska State Medical Association to hold its 1966 Annual Session in Lincoln, Nebraska. It was moved and seconded to accept this invitation, and the motion carried.

The Speaker called for the usual letters of appreciation to the Omaha-Douglas County Medical Society, the Omaha Chamber of Commerce and the Sheraton-Fontenelle Hotel. This was approved by the House.

There being no further business, the meeting was adjourned.

## PROCEEDINGS of the BOARD OF COUNCILORS

### Nebraska State Medical Association

#### First Session — April 27, 1965

The first session of the Board of Councilors was held at the Sheraton-Fontenelle Hotel, April 27, 1965.

The following members were present: Drs. Leroy W. Lee, John T. McGreer, Jr., W. W. Waddell, George Salter, H. D. Kuper, C. L. Anderson, Chas. F. Ashby, Dan Nye, L. S. McNeill and C. J. Cornelius. Others present were Drs. Garlinghouse, K. S. J. Hohlen, Wm. Nutzman, C. N. Sorensen, M. E. Grier and James Kelly, Sr.

The meeting was called to order by the Chairman, Dr. Waddell.

The minutes of the mid-winter meeting were approved as published in the April, 1965 issue of the Journal.

Dr. Waddell informed the Councilors that two members of the Board of Trustees were to be elected. The term of M. E. Grier, MD, expired, and J. M. Woodward, MD, has resigned from the Board. Dr. Waddell stated that a Board member would need to fill the unexpired term of Dr. Woodward, a term of one year.

Following discussion, it was decided that election of these two members of the Board of Trustees be held over until the second session. It was moved by Dr. Nye that this be tabled until the second session. The motion was seconded and carried.

The Chairman stated that one member of the Medicolegal Advice Committee was to be elected, the term of James F. Kennedy expiring. After discussion, it was moved by Dr. Anderson that this also be held over until the second session to determine if Dr. Kennedy wished to serve another term. The motion was seconded and carried.

The Chairman stated that one member of the Council on Professional Ethics was to be elected, the term of K. S. J. Hohlen, MD expiring. Dr. Waddell informed the Councilors that Dr. Hohlen had stated that he did not wish to serve on this Council any longer.

Dr. McGreer was granted permission of the floor and nominated Dr. Paul Bancroft of Lincoln to the Council on Professional Ethics. There being no further nominations, Dr. McNeill moved that the nominations be closed and that Dr. Bancroft be elected. This was seconded and carried.

Dr. Hohlen, Chairman of the Council on Professional Ethics, was asked to present an oral report.

It was moved by Dr. McGreer that this report be accepted. The motion was seconded and carried.

Dr. Anderson moved that Dr. Hohlen be commended for his 15 years of service on this committee, and that an appropriate resolution be prepared. This was seconded and carried.

Dr. Waddell read the following requests for Life Memberships: Drs. Milton F. Arnholt, Lincoln; A. J. Courshon, Chadron; Harry E. Harvey, Lincoln; Herman Johnson, Omaha; J. D. McCarthy, Omaha; George H. Misko, Lincoln; Charlotte P. Seiver, Fremont; James M. Woodward, Lincoln, and J. G. Woodin, Grand Island.

It was moved by Dr. McGreer that these requests be adopted and forwarded to the House of Delegates for action. This was seconded and carried.

Dr. Garlinghouse was granted permission of the floor and stated that he would like to suggest that consideration be given to some remuneration to the President of the Nebraska State Medical Association. He stated that the office of President demanded much of the doctor's time away from the office, and that there were extra expenses for which he was not reimbursed.

There being no further business, the meeting was adjourned until Wednesday morning.

#### Second Session — April 28, 1965

The second session of the Board of Councilors was called to order by the Chairman, Dr. Waddell.

Members present were Drs. Lee, McGreer, Waddell, Salter, Kuper, Anderson, Ashby, McNeill, and Cornelius.

The minutes of the first session were read and approved.

The Chairman called for election of a member for the Board of Trustees to replace Dr. Grier. Dr. Lee was asked for recommendations from Omaha, and the names of Drs. Ed Walsh and R. Russell Best were submitted.

The motion was made by Dr. Anderson that Dr. Best be nominated. There being no other nominations from the floor, Dr. McNeill moved that a unanimous vote be cast for Dr. Best. The motion carried.

Nominations were called for another member of the Board of Trustees to fill the vacancy due to the resignation of Dr. Woodward. Dr. McGreer nominated Dr. Robert Stein, and Dr. Ashby nominated Dr. Salter. It was moved by Dr. McNeill that the nominations be closed. This was seconded and carried.

Ballots were distributed to the Councilors, and Dr. Geo. Salter was elected to fill the unexpired term of Dr. Woodward.

It was moved and seconded that the 4th District be consulted as to nominations to be given to the House of Delegates at their third session for a successor to Dr. Salter, and the motion carried.

Nominations were called for a member of the Medicolegal Advice Committee. Dr. Cornelius moved that Dr. Kennedy be reappointed, and a unanimous ballot was cast for Dr. Kennedy.

There being no further business, the meeting was adjourned until Thursday morning.

### Third Session — April 29, 1965

The third session of the Board of Councilors was called to order by the Chairman, Dr. Waddell.

Members present were Drs. Lee, McGreer, Waddell, Salter, Kuper, Anderson, Ashby, McNeill and Cornelius. Also present was Dr. H. V. Smith, new Councilor of the 9th District.

The minutes of the second session were approved as read.

It was suggested that the Board of Councilors hold their mid-winter meeting on Friday preceding the meetings of the House of Delegates on Saturday and Sunday. In this way, any officers, committee chairmen or councilors wishing also to attend the House of Delegates could do so without the necessity of two trips. This was approved.

The Board of Councilors was informed that the House of Delegates had referred a resolution presented by the Adams County Medical Society regarding the reorganization of the NSMA so as to achieve a more representative body in the Board of Councilors and the House of Delegates, to this body for study so that specific recommendations might be made.

Following discussion, it was suggested that maps of Nebraska be prepared, showing the 12 Councilor Districts, the number of physicians in each county and the total physicians in each District. It was moved by Dr. Lee that these maps be prepared and sent to each Councilor two months before the next meeting. This was seconded and carried.

There being no further business, the meeting was adjourned.

## ROSTER OF HOUSE OF DELEGATES

April 26, 28 and 29, 1965

| ADAMS—                            |    |    |    |
|-----------------------------------|----|----|----|
| Chas. Landgraf, Jr., Hastings (D) | 26 | 28 | 29 |
| Loyd Wagner, Hastings (A)         | P  | P  | P  |
| ANTELOPE—                         |    |    |    |
| Dwaine Peetz, Neligh (D)          | P  | P  | P  |
| Frank McClanahan, Neligh (A)      |    |    |    |
| BOONE—                            |    |    |    |
| Roy J. Smith, Albion (D)          |    | P  |    |
| Gerald Spethman, Albion (A)       |    |    |    |

| BOX BUTTE—                         |   |   |   |
|------------------------------------|---|---|---|
| W. L. Howell, Hyannis (D)          | P |   |   |
| J. J. Ruffing, Hemingford (A)      | P | P | P |
| BUFFALO—                           |   |   |   |
| H. V. Smith, Kearney (D)           | P | P | P |
| F. L. Richards, Kearney (A)        |   |   |   |
| BURT—                              |   |   |   |
| I. Lukens, Tekamah (D)             |   |   |   |
| L. Morrow, Tekamah (A)             |   |   |   |
| BUTLER—                            |   |   |   |
| L. R. Rudolph, David City (D)      |   |   |   |
| W. C. Niehaus, David City (A)      |   |   |   |
| CASS—                              |   |   |   |
| R. R. Andersen, Nehawka (D)        | P | P | P |
| R. Brendel, Plattsmouth (A)        |   |   |   |
| CHEYENNE KIMBALL-DEUEL—            |   |   |   |
| C. B. Dorwart, Sidney (D)          | P | P |   |
| S. R. Rathbun, Sidney (A)          |   |   |   |
| CLAY—                              |   |   |   |
| H. V. Nuss, Sutton (D)             |   | P | P |
| COLFAX—                            |   |   |   |
| H. Dey Myers, Schuyler (D)         |   |   |   |
| John R. O'Neal, Clarkson (A)       |   |   |   |
| CUMING—                            |   |   |   |
| L. J. Chadek, West Point (D)       |   |   |   |
| R. H. Scherer, West Point (A)      |   |   |   |
| CUSTER—                            |   |   |   |
| Theo. Koefoot, Jr., Broken Bow (D) |   |   |   |
| Ralph Blair, Broken Bow (A)        |   |   |   |
| DAWSON—                            |   |   |   |
| P. Bryant Olsson, Lexington (D)    | P | P | P |
| V. D. Norall, Lexington (A)        |   |   |   |
| DODGE—                             |   |   |   |
| Robert Sorensen, Fremont (D)       | P | P | P |
| J. L. Dyer, North Bend (A)         |   |   |   |
| FILLMORE—                          |   |   |   |
| V. S. Lynn, Geneva (D)             |   | P | P |
| A. A. Ashby, Geneva (A)            |   | P |   |
| FIVE COUNTY—                       |   |   |   |
| C. M. Coe, Wakefield (D)           |   |   |   |
| Wm. Reynolds, So. Sioux City (A)   |   |   |   |
| R. P. Carroll, Laurel (D)          |   |   |   |
| Hy Billerbeck, Randolph (A)        |   |   |   |
| John T. Keown, Pender (D)          |   |   |   |
| George John, Wayne (A)             |   |   |   |
| FOUR COUNTY—                       |   |   |   |
| Roy Cram, Burwell (D)              |   |   | P |
| Otis Miller, Ord (A)               |   |   |   |
| FRANKLIN—                          |   |   |   |
| W. A. Doering, Franklin (D)        | P | P |   |
| C. J. Thomas, Franklin (A)         |   |   |   |
| GAGE—                              |   |   |   |
| H. F. Elias, Beatrice (D)          | P | P |   |
| J. D. Chapp, Beatrice (A)          | P |   |   |
| GARDEN-KEITH-PERKINS—              |   |   |   |
| A. B. Albee, Oshkosh (D)           |   |   | P |
| R. C. Chase, Ogallala (A)          |   |   |   |
| HALL—                              |   |   |   |
| Warren Bosley, Grand Island (D)    | P | P | P |
| P. T. Sloss, Grand Island (A)      |   |   |   |
| HAMILTON—                          |   |   |   |
| H. G. Steenburg, Aurora (D)        | P | P | P |
| J. M. Woodard, Aurora (A)          |   |   |   |
| HARLAN—                            |   |   |   |
| K. C. McGrew, Orleans (D)          |   |   |   |
| H. R. Walker, Alma (A)             | P | P | P |
| HOLT and N.W.—                     |   |   |   |
| James E. Ramsay, Atkinson (D)      | P | P | P |
| HOWARD—                            |   |   |   |
| M. D. Mathews, St. Paul (D)        |   |   |   |
| R. W. Hanisch, St. Paul (A)        |   |   |   |
| JEFFERSON—                         |   |   |   |
| K. J. Kenney, Fairbury (D)         |   | P |   |
| Frank Falloon, Fairbury (A)        |   |   |   |
| JOHNSON—                           |   |   |   |
| John C. Schutz, Tecumseh (D)       |   |   |   |
| M. F. Sorrell, Tecumseh (A)        |   |   |   |
| KNOX—                              |   |   |   |
| R. L. Tollefson, Wausa (D)         |   |   |   |
| Stanley Neil, Niobrara (A)         | P | P | P |
| LANCASTER—                         |   |   |   |
| Bernard Wendt, Lincoln (D)         |   |   |   |
| Paul Goetowski, Lincoln (A)        | P | P | P |
| Donald Purvis, Lincoln (D)         |   |   |   |
| Roy Statton, Lincoln (A)           |   | P | P |
| Paul Maxwell, Lincoln (D)          |   |   |   |
| Frank Tanner, Lincoln (A)          |   |   |   |
| Maurice D. Frazer, Lincoln (D)     | P | P | P |
| A. L. Smith, Jr., Lincoln (A)      |   |   |   |
| L. J. Gogela, Lincoln (D)          |   |   | P |
| Donald Matthews, Lincoln (A)       |   |   |   |
| LINCOLN—                           |   |   |   |
| Bruce Claussen, North Platte (D)   | P | P | P |
| G. E. Sawyers, North Platte (A)    |   |   |   |
| MADISON—                           |   |   |   |
| J. H. Dunlap, Norfolk (D)          |   | P | P |
| J. D. Pollack, Norfolk (A)         |   |   |   |



|                                 |       |   |     |
|---------------------------------|-------|---|-----|
| MERRICK                         |       |   |     |
| NEMAHA—                         |       |   |     |
| J. J. Bence, Auburn (D)         | ----- | P |     |
| P. M. Scott, Auburn (A)         | ----- | P | P   |
| NORTHWEST NEBR.—                |       |   |     |
| A. J. Alderman, Chadron (D)     | ----- | P | P   |
| L. H. Hoevet, Chadron (A)       | ----- |   |     |
| NUCKOLLS—                       |       |   |     |
| Claude T. Mason, Superior (D)   | ----- | P | P   |
| Robert Howe, Nelson (A)         | ----- |   |     |
| OMAHA-DOUGLAS—                  |       |   |     |
| G. B. McMurtrey, Omaha (D)      | ----- | P | P P |
| G. C. Schreiner, Omaha (A)      | ----- |   |     |
| W. J. McMartin, Omaha (D)       | ----- | P | P P |
| E. L. MacQuiddy, Jr., Omaha (A) | ----- |   | P   |
| W. F. Giles, Omaha (D)          | ----- | P | P P |
| M. E. Stoner, Omaha (A)         | ----- |   |     |
| D. W. Burney, Jr., Omaha (D)    | ----- | P |     |
| J. A. Pleiss, Omaha (A)         | ----- | P |     |
| T. J. Gurnett, Omaha (D)        | ----- | P | P P |
| J. J. O'Neil, Omaha (A)         | ----- |   |     |
| Arnold Lempka, Omaha (D)        | ----- | P | P P |
| J. J. Grier, Omaha (A)          | ----- |   |     |
| Richard Egan, Omaha (D)         | ----- | P | P P |
| W. E. Kelley, Omaha (A)         | ----- |   |     |
| J. D. Coe, Omaha (D)            | ----- |   |     |
| J. X. Tamisiea, Omaha (A)       | ----- | P | P P |
| T. T. Smith, Omaha (D)          | ----- | P |     |
| S. M. Truhlsen, Omaha (A)       | ----- | P |     |
| C. A. McWhorter, Omaha (D)      | ----- | P | P P |
| A. W. Abts, Omaha (A)           | ----- | P | P P |
| OTOE—                           |       |   |     |
| T. L. Weekes, Nebraska City (D) | ----- | P | P P |
| W. C. Kenner, Nebraska City (A) | ----- |   |     |
| PAWNEE—                         |       |   |     |
| H. C. Stewart, Pawnee City (D)  | ----- |   | P P |
| A. B. Anderson, Pawnee City (A) | ----- |   |     |
| PHELPS—                         |       |   |     |
| H. A. McConahay, Holdrege (D)   | ----- | P | P   |
| W. M. Reiner, Holdrege (A)      | ----- |   |     |
| PIERCE—                         |       |   |     |
| PLATTE—                         |       |   |     |
| Robert I. Burns, Columbus (D)   | ----- | P | P P |
| Herbert Kuper, Columbus (A)     | ----- |   |     |
| POLK—                           |       |   |     |
| Jim S. Carson, Osceola (D)      | ----- | P |     |
| H. S. Eklund, Osceola (A)       | ----- |   | P   |
| RICHARDSON—                     |       |   |     |
| Wm. Glenn, Falls City (D)       | ----- | P | P   |
| Robert L. Heins, Falls City (A) | ----- |   |     |
| SALINE—                         |       |   |     |
| L. W. Forney, Crete             | ----- |   |     |
| Robert E. Quick, Crete (A)      | ----- |   | P   |
| SAUNDERS—                       |       |   |     |
| R. A. Youngman, Ceresco (D)     | ----- |   |     |
| I. M. French, Wahoo (A)         | ----- |   |     |
| SCOTTS BLUFF—                   |       |   |     |
| Edwin Loeffel, Mitchell (D)     | ----- | P | P   |
| Carl Frank, Scottsbluff (A)     | ----- | P | P P |
| SEWARD—                         |       |   |     |
| W. Ray Hill, Seward (D)         | ----- | P |     |
| Robt. Herpolsheimer, Seward (A) | ----- |   |     |
| SOUTHWEST NEBR.—                |       |   |     |
| Fay Smith, Imperial (D)         | ----- | P | P P |
| THAYER—                         |       |   |     |
| L. G. Bunting, Hebron (D)       | ----- | P | P   |
| R. E. Penry, Hebron (A)         | ----- |   |     |
| WASHINGTON—                     |       |   |     |
| R. F. Sievers, Blair (D)        | ----- | P | P   |
| C. D. Howard, Blair (A)         | ----- |   |     |
| YORK—                           |       |   |     |
| R. E. Harry, York (D)           | ----- | P | P P |
| H. Friesen, Henderson (A)       | ----- |   |     |

## ADDRESS BY RETIRING PRESIDENT

Fellow members of the Nebraska State Medical Association and guests, this is undoubtedly the most difficult task that I have had to perform during my term of office. In normal times the final report of the outgoing president is a more or less triumphant recital of all of the accomplishments of the organization during the past year; however, this year any success or accomplishment is so far overshadowed by the cloud of Medi-

care that such a review would be completely meaningless.

We must spend the next few minutes considering the practice of medicine and the future of the Nebraska State Medical Association. I would not presume to suggest any definite solution to our dilemma but I believe that some of the possibilities of future action should be explored.

During the past two years I have learned much about my colleagues, and one characteristic that stands out is that doctors are rugged individualists. In any group of physicians there will always be a variety of opinions and solutions to any problem. Now, however, I feel that we must develop a plan of approach to the new problems of our profession through the strongest possible leadership. Individuality must at times give way to cooperation. Then even though portions of the accepted plan may not be completely to the liking of all physicians we must give it as nearly unanimous approval and backing as is possible in the medical profession. It is my considered opinion that much of the weakness of organized medicine is due to this tremendous variation in opinions of individuals or groups, sincere though this difference may be. There has been growing criticism of organized medicine, both the American Medical Association, Nebraska State Medical Association, and on occasions even the various county societies, and I am sure there will be more. Some of this is deserved. Much is not. In fact, most is not. Perhaps the increased criticism by our own members is an indication of growing interest in our organizations and their potential strength. A curious paradox is that through cooperation and hard work we can solve clinical problems; but by the same process in socio-economic problems, we frequently grow further apart and the ultimate solution becomes remote.

What then are some of the possible plans that we must consider in dealing with the government or its agents in the now certain Medicare plan? Several pertinent facts can operate to our advantage. The first of these is that only physicians can furnish medical care. In spite of this fundamental factor



the medical profession was not consulted in formulating Medicare. Some day before this plan can be implemented such a conference will be absolutely essential. On this day we must have a definite plan with as nearly unanimous approval by the individual members of the profession as is possible. The greatest disaster that could occur to us would be to have such division in our policy that the government would deal with individual doctors or small groups or small organizations. *THIS MUST NOT HAPPEN.*

Another factor operating in our favor is that no one but the medical profession can assess the quality or adequacy of medical care supplied. Furthermore, no one but the medical profession can assess the proper utilization of hospitals. It would seem inconceivable that the government would not assign these functions to the medical profession. We must supply this knowledge *fairly* and *honestly* both for the welfare of our *patients* and also for the honor of our profession.

At the onset of consideration of any plan we must always bear in mind that our prime function in life is the care of the sick and injured to the best of our ability. The Hippocratic oath and our code of ethics must always be a part of any negotiation although this will be either little understood or sought after by a governmental agency.

As far as specific plans are concerned I can see three possible courses. In no way is it my intention to recommend any one of these but merely to bring them to light for your consideration and to point out some of the advantages and disadvantages of each.

The first of these could be termed the "Plan of Cooperation" in which the medical profession accepts the federal Medicare program as an inevitable part of the social revolution and then sincerely and wholeheartedly attempts to make the plan work to the mutual advantage of the physician and the patient. If this plan is the one to be followed, strong leadership must be developed and then the power to negotiate delegated to them. Through strength and a sincere cooperative spirit it is possible to control the Medicare plan and to limit its spread

and growth. It will require tremendous sacrifice and often much heartache on the part of the entire medical profession. It is possible, however, for this plan to be a success.

The second plan could be termed the "Plan of Active Resistance." After all it is absolutely essential that there be some physician cooperation or the Medicare plan is doomed to failure, for no one but a physician can care for the sick and injured. This plan certainly offers interesting food for speculation. I am sure there already is some planning along these lines but I feel that future planning must be given the most careful consideration and thought. Any such plan requires the *utmost* in mature judgment for the very future of medicine could depend upon such a plan. We simply cannot afford to refuse to care for those who fall under the provisions of the Medicare plan even if the medical profession must devise a method to forego fees to such persons. It is only fair to point out that the burden of this plan would fall heavily on those doctors whose practice is directed toward care of the elderly. Such a plan could work but it would require tremendous leadership and the maximum in cooperation by the entire profession. Winston Churchill's "blood, sweat and tears" would be essential.

The third plan could be termed "Heads in the Sand" or "Every Man for Himself." This carries great dangers to the profession as a whole because without a negotiating force from a strong and united organized medicine, governmental agencies will surely make the rules and regulations without any particular regard for the individual with whom the agency is negotiating. It is possible that this plan will be in force unless organized medicine can come up with a workable plan in the next few months that has the nearly unanimous backing of the profession. I think that is obvious that a bureaucracy would favor and even nurture such a plan even though it would not be in the best interest of either the patient or the profession.

In the last few minutes in my speculations concerning the future of medicine I

hope that I have conveyed the idea that we must have an improved organized medicine. Lately, I have heard several times that since we now have socialized medicine we no longer have need for the Nebraska State Medical Association. Nothing could be further from the truth. *Never*, I repeat *never*, have we been in more desperate need of organization. Allow me to urge every membe<sup>r</sup> to take an active interest in the Nebraska State Medical Association and to support the various committees, the council, the House of Delegates and officers with all of your energies including a portion of your valuable time and your advice. This is not a pep talk — it is merely a statement of hard, cold, brutal facts.

I feel compelled to make a few remarks concerning the so-called "public image" or "stature" of the medical profession. Both of these terms I dislike intensely. The medical profession has always commanded the respect of our patients and this is the public in whom we are interested. We shall always command this respect so long as we practice medicine to the best of our capabilities. There are certain segments of the population, particularly those interested in suppressing free enterprise and fostering socialism who have made concerted and persistent efforts to reduce or even destroy this respect. Unfortunately some of the members of the press have been duped into accepting the completely dishonest statements of these amoral individuals. This, of course, constitutes a completely irresponsible, uninformed, and often times vicious type of journalism. Happily, I have observed that lately there has been a trend by the press, both editorially and in news reporting, to reverse this antagonism toward the medical profession, although this is certainly not universal. It is time for the physicians of Nebraska to assert their pride in a profession that has given to this country the best medical care in the world. A profession that has throughout its history maintained the highest standards of ethics, self-sacrifice, and dedication to self-improvement should not hesitate to make these facts known. Through our efforts, our patients have come to expect superior standards of care and treatment.

We must help them, through continuing to express pride in our profession by word and deed to preserve these high standards against the inroads of the welfare state.

And now it is time to give sincere thanks to those who have made this year such a memorable one — to my family who have so often awaited with understanding and patience my return from a trip or committee meeting — to the office staff for their untiring work and to each member of the State Medical Association. I shall forever be appreciative and humble for the great honor bestowed upon me by the physicians of Nebraska. To Dr. Wright I fondly wish a more successful term of office than the past one. It has truly been a pleasant experience to work with one as knowledgeable, as honest, as ethical and as untiring as Dr. Wright. The presidency is in capable hands. He deserves your enthusiastic support.

—R. E. Garlinghouse, MD

## THE MONTH IN WASHINGTON

The American Medical Association warned Congress that passage of the medicare bill could lead eventually to the troubles encountered in nations that have centralized government medical plans.

"The American system of medicine for generations has been a system of quality medicine, practiced through a voluntary relationship between patients and physicians, with doctors free to make decisions based on the patient's specific needs and nothing else," Dr. Donovan F. Ward, AMA President, told the Senate Finance Committee.

"Yet we have seen the trying problems in other lands and the results engendered by centralized government programs to provide health care for a large segment of the population," Dr. Ward declared. "Long waits, poor equipment and facilities, short, impersonal examinations, and lots of record keeping appear to be the major accomplishments of nationalized health systems. Can we hope the American plan will be so different as to negate all these adverse factors?"



He continued:

"We think not. Forget for a moment the staggering, though unpredictable, cost of the pending program. Ignore the administrative problems that it would create, and the burden it means for wage earners at the low end of the income scale.

"Look only at the intrusion of government in the field of medicine, which cannot be avoided if this measure is adopted. With the quantity of care thus restricted for the sake of controlling costs, the quality must deteriorate. The patient is the ultimate sufferer. But his disillusionment is shared by those who serve him. With the advent of state medicine, professional discontent appears to be the rule rather than the exception. Look again at the experience of the foreign programs.

"This may be our last chance to ask you to write legislation which will meet the nation's needs and at the same time avoid the pitfalls of a government-financed, government-controlled, and government-oriented health care system. This may be your last chance to weigh the consequences of taking the first step toward establishment of socialized medicine in the United States," Dr. Ward concluded.

Continuing emphasis on vaccination against smallpox in the United States was urged by the AMA. Following announcement that a case of the disease had been discovered in Washington, D.C., the AMA declared that there was no basis for panic or alarm, and said that there was no need for emergency, mass vaccination campaigns.

The AMA said the effectiveness of the American Medical Association, local medical societies, physicians, hospital administrations, and governmental health agencies to raise the level of immunity to smallpox through vaccination were challenged with the first case of smallpox reported in this country in 20 years.

"Because of the hazard of such importations of smallpox, a disease which can kill or maim, the AMA and others have advocated continuing vaccination programs in this country," the AMA said. "The danger was

particularly emphasized over two years ago by Dr. Raymond L. White, director of the Division of Socio-Economic Activities of the AMA. Dr. White pointed out the need for 'defense in depth' through ongoing intensive vaccination programs for those who are apt to contact international travelers, and those who meet or treat the sick, in addition to the general public programs."

The Supreme Court held that Connecticut's 1879 law forbidding use and prescription of contraceptives is unconstitutional.

The majority in the 7-2 opinion said that "a governmental purpose to control or prevent activities constitutionally subject to state regulation may not be achieved by means which sweep unnecessarily broadly and thereby invade the area of protected freedom."

The challenge to the Connecticut law was made by the State's Planned Parenthood League. It stemmed from the conviction of Mrs. Estelle T. Griswold and Lee Buxton, MD, on charges of violating the law by operating a birth control clinic.

An attempt to challenge the law was made in 1961, but the Supreme Court refused to consider the issue then because no arrests had been made.

"Would we allow the police to search the sacred precincts of marital bedrooms for telltale signs of the use of contraceptives?" the opinion said. "The very idea is repulsive to the notions of privacy surrounding the marriage relationship."

A Senate Aging subcommittee recommended that self-employed persons be given special tax incentives to encourage them to take part in private pension programs. The recommendation was included in a report by the Subcommittee on Employment and Retirement Incomes which held four days of hearings on the subject in March.

The subcommittee endorsed two tax changes that the American Medical Association had urged in a statement to the group earlier this year. One would remove present restrictions in the Smathers-Keogh law



that allows tax deferrals on money invested in pension plans by self-employed persons, including physicians. The other would allow physicians who form professional groups to have their business income treated for Federal tax purposes the same as other business corporations.

The Food and Drug Administration has proposed that foods intended to regulate the intake of fats be accurately labeled to show the amounts and classes of fatty acids, including polyunsaturates, contained in them.

The drug industry is establishing a foundation to help promote "scientific and medical research." The foundation being established by the Pharmaceutical Manufacturers Association will plan and initiate research as well as collect and distribute results of the research. It also expects to help finance research projects, the PMA announcement said. The foundation will begin work on a modest scale, "first assembling data on what now is being done in the field by industry, research and educational groups," PMA said.

## IN MEMORIAM

|                           |                                 | Deceased           |
|---------------------------|---------------------------------|--------------------|
| PAYSON ADAMS.....         | Omaha .....                     | December 29, 1964  |
| AGNES ANDERSON.....       | Ingleside .....                 | November 22, 1964  |
| J. G. ALLEN.....          | Tekamah .....                   | July 3, 1964       |
| E. W. BANTIN.....         | Omaha .....                     | January 10, 1965   |
| J. A. BURFORD.....        | Omaha .....                     | June 8, 1964       |
| A. J. CALLAGHAN.....      | North Platte .....              | August 2, 1964     |
| C. H. CAMPBELL.....       | Columbus .....                  | August 17, 1964    |
| EDWIN DAVIS.....          | Omaha .....                     | February 17, 1964  |
| PALMER FINDLEY.....       | Omaha .....                     | November 10, 1964  |
| D. L. FLETCHER.....       | Orchard .....                   | September 13, 1964 |
| GEORGE FRAZIER.....       | Niobrara .....                  | November 25, 1964  |
| W. H. HAHN.....           | (Omaha) Boca Raton, Fla. ....   | June 23, 1964      |
| HARRY J. JENKINS, SR..... | Omaha .....                     | October 20, 1964   |
| IVAN C. LOVETT.....       | Scottsbluff .....               | July 4, 1964       |
| ROBERT McGEE.....         | St. Edward .....                | September 17, 1964 |
| MARY MacVEAN.....         | Nebraska City .....             | August 21, 1964    |
| H. W. MAHON.....          | Newman Grove .....              | November 24, 1964  |
| Z. E. MATHENY.....        | Lincoln .....                   | November 9, 1964   |
| HARRY McGEE.....          | Omaha .....                     | February 6, 1965   |
| C. J. MILLER.....         | Ord .....                       | July 24, 1964      |
| CLYDE MOORE.....          | Omaha .....                     | July 7, 1964       |
| HARLAN MOORE.....         | Sutherland .....                | August 9, 1964     |
| JOHN K. MULDOON.....      | Omaha .....                     | April 17, 1965     |
| LA VERNE PFEIFER.....     | Lincoln .....                   | May 7, 1964        |
| EMMA ROBBINS.....         | Lincoln .....                   | April 13, 1965     |
| M. J. POWELL.....         | Fairbury .....                  | October 7, 1964    |
| D. B. STEENBURG.....      | Aurora .....                    | November 29, 1964  |
| C. H. SWIFT, SR.....      | Crofton .....                   | February 24, 1965  |
| I. L. THOMPSON.....       | West Point .....                | December 8, 1964   |
| J. S. WELCH.....          | (Lincoln) Rochester, Minn. .... | March 30, 1965     |



# Books



**"Surgery of the Biliary Passages and the Pancreas"**  
by Walter Hess, MD. Published 9 April 65  
by D. Van Nostrand Company, Inc., Princeton,  
New Jersey. 638 pages with 42 tables and 267  
figures and illustrations. Price \$25.00.

The author of this book is a member of the teaching staff at the University of Basle, Switzerland. Formerly he was Professor of Surgery at the Medical School of the University of Alexandria in Egypt. His book is based on statistical evidence from 1654 patients with biliary and/or pancreatic disease, patients who have been personally observed or cared for by the author.

This book begins with a discussion of the anatomy and physiology of the biliary tract and pancreas, followed by chapters on clinical findings and pathology. Biochemical tests, cholecystocholangiography, cholangiomanometry ("radiomanometry"), endoscopy of the biliary passages, and X-ray visualization of the pancreatic duct system are then discussed.

The second part of the book deals with operative techniques of all types, including operations on the autonomous nervous system supplying these organs. The author tells in detail when to do what operation. Pre-operative and post-operative care, metabolic derangements, and post-operative complaints are presented in detail.

The translator's consistent use of American terms for instruments and drugs makes this book more useful to the American reader.

**"Cardiomyopathies,"** a Ciba Foundation Symposium, edited by G. E. W. Wolstenholme, FRCP, and Maeve O'Connor, BA. Published in December 1964 by Little, Brown and Company of Boston. 428 pages with 136 illustrations. Price \$12.50.

Twenty-nine eminent authorities from England, USA, Sweden, Scotland, Canada, and India met in London in April of 1964 to discuss the following subjects:

- a. Hypertrophic obstruction of the left ventricular outflow
- b. Muscular subaortic stenosis
- c. Diagnosis of various types of hypertrophic obstructive cardiomyopathy
- d. Drug-induced myopathies
- e. Endomyocardial fibrosis
- f. Fibroelastosis
- g. Friedreich's disease
- h. Viral myocarditis
- i. Surgical treatment of obstructive cardiomyopathies

**"Fracture Problems"** — (Problem Cases from Fracture Grand Rounds at the Massachusetts General Hospital) — by W. H. Harris, MD; W. N. Jones, MD, and O. E. Aufranc, MD. Published 22 April 65 by The C. V. Mosby Company of St. Louis, Missouri. 371 pages with 199 figures, including 5 in color. Price \$20.00.

This book is based upon the cases published as "Fracture of the Month" in the Journal of the American Medical Association from July, 1960, to July, 1964. The orthopedic visiting staff and the orthopedic residents at the Massachusetts General Hospital have carried on the bulk of the dialogue. However, 18 orthopedic specialists from other hospitals and medical schools have been included as guest participants.

The cases chosen for presentation have, on the whole, been difficult problems in management, and by reviewing the protocols the reader can observe that there has been far from unanimity of opinion as to the best methods to employ in treatment. This is as it should be. Such differences of opinion promote lively discussions by which the reader can learn a great deal.

Some of the problems discussed include the following:

- a. Fracture of the talus
- b. Trimalleolar fracture of the ankle
- c. Open tibial shaft fracture with a depressed lateral plateau
- d. Bumper fracture of the knee
- e. Fat emboli
- f. Management of sepsis following hip nailing
- g. Inner wall fracture of the acetabulum
- h. Traumatic spondylolisthesis
- i. Sideswipe injury to the elbow
- j. Nonunion of the humerus

**"Early History of the Ochsner Medical Center"** by G. A. Caldwell, MD. Published 20 April 65 by Charles C. Thomas of Springfield, Illinois. 115 pages. Price \$4.75.

Many who pass the complex of splendid buildings located at 1514 Jefferson Highway in New Orleans have paused to ask: "How did these institutions begin and how were they developed?" This book presents the factual story of the conception, early development, and growth of the Clinic and related organizations that now form the Ochsner Medical Center.

The author is one of the five original partners who established the Ochsner Clinic. He tells an interesting story of the many people who contributed to the growth of the Center and recounts the many problems that had to be overcome during the early years.



# TUBERCULOSIS ABSTRACTS

## ABNORMALITIES OF RESPIRATORY FUNCTION IN VARICELLA PNEUMONIA

Alveolar-capillary gas exchange was abnormal in acute varicella pneumonia when measured in adults during or after chickenpox infection. There was no evidence of ventilatory impairment.

While the seriousness of primary varicella pneumonia is recognized, information concerning the physiological alterations of this disease is lacking. Dyspnea, cyanosis, and tachypnea are often present and contrast with the few findings on physical examination of the chest.

The diffuse nodular pulmonary densities and prominent bronchovascular markings seen on X rays are similar to the changes of sarcoid, miliary tuberculosis, and carcinomatosis. Cyanosis, diffuse nodular pulmonary infiltration, and hyperventilation, in combination, point to impairment in alveolar-capillary gas exchange.

Since there is no precise definition of the functional abnormalities of primary varicella pneumonia, the present study was undertaken to determine the character of the respiratory defect, its extent, and duration.

### STUDY COMPOSITION

In the study were 17 adults hospitalized with varicella and 4 persons with histories of chickenpox in adult life. Ten of the 17 patients showed the characteristic X-ray changes of primary varicella pneumonia, while 7 had normal radiographs. Ten patients with other acute diseases but with normal cardiopulmonary examinations served as controls.

Alveolar-capillary gas exchange of the chickenpox patients was assessed at rest and, if possible, at exercise, by measurement of the steady-state carbon monoxide diffusing capacity ( $DL_{CO}$ ). Arterial blood was sampled; oxygen saturation, carbon dioxide content, and pH were measured; and carbon dioxide tension calculated. Measurements of ventilatory capacity were obtained as soon as the patients were no longer contagious.

### FUNCTIONAL FINDINGS

Nine of the 10 patients with varicella pneumonia complained of cough, and minor hemoptyses occurred in 3. Five patients reported dyspnea but it was severe in only one.

The mean values for the maximum breathing capacity and vital capacity were within normal limits for 9 patients with varicella pneumonia, 4 with histories suggestive of varicella pneumonia, and 4 with varicella without pneumonia. The highest mean maximum breathing capacity (123 per cent) was obtained in the acute varicella pneumonia group. The lowest mean values for both maximum breathing capacity (107 per cent) and vital capacity (96 per cent) occurred in the patients with histories suggestive of acute varicella pneumonia. No evidence of airway obstruction was found in any individual.

All patients with acute varicella pneumonia had impaired carbon monoxide diffusion at rest as well

as at exercise. Diffusion studies on the subjects with histories of respiratory embarrassment during chickenpox were also impaired at rest and exercise but to a lesser extent than the acute varicella pneumonia group. The mean resting results for varicella patients without pneumonia were identical to the controls. However, measurements of exercise diffusion in 3 patients with varicella without pneumonia were somewhat reduced.

Arterial oxygen saturation in the varicella pneumonia patients did not differ greatly from the controls. Patients with acute pneumonia showed the greatest degree of hyperventilation as judged by pH and carbon dioxide tension values.

### DIFFUSING CAPACITY

In general, resting and exercise diffusing capacity measurements improved with time. In 3 patients resting values returned into the normal range between the first and third months. In the others, normal resting values were not obtained over an observation period of 4 to 13 months. Exercise values reveal more scatter and 4 patients show an apparent reduction in diffusing capacity at some time during the period studied.

The subjective complaint of dyspnea did not correlate with the results of diffusion measurements. The individual with the least diffusion impairment complained of dyspnea while the patient with the most did not.

A significant diffusion defect in acute varicella pneumonia was demonstrated. Only 3 of 7 patients with acute varicella pneumonia returned to the control range of resting diffusion capacity in the period of observation and in only one did the exercise capacity become normal. Data obtained in patients with histories suggestive of varicella pneumonia indicate impairment may persist for eight years.

Few physiological investigations of viral pneumonias have been reported and the occurrence of abnormalities in gas exchange is not widely appreciated. In a recent study of a variety of viral pneumonias other than varicella, diffusion abnormalities similar to those of the present study were found during the acute phase and in a six-month follow up.

### NO VENTILATORY IMPAIRMENT

An increased venous admixture was found in many patients during the acute illness. It decreased during the convalescent period. Data from the present study do not permit quantitative assessment of shuntlike pulmonary blood flow although the arterial oxygen saturation on breathing oxygen for 15 minutes did not rise as high in 8 patients with varicella pneumonia as it did in 4 control subjects.

The question of obstructive ventilatory insufficiency as a cause of respiratory distress may be raised.

Wheezing respirations and prolongation of the expiratory phase in more than 50 per cent of patients with varicella pneumonia have been reported, but airway obstruction was not confirmed. In the present series one patient was found to have expiratory wheezing, but the ventilatory studies in



this subject indicate no evidence of an obstructive defect. Thus, little objective evidence exists for ventilatory impairment in acute varicella pneumonia.

—Jose S. Bocles, MD; N. Joel Ehrenkranz, MD, and Asher Marks, MD. *Annals of Internal Medicine*, February, 1964.

## SMOKING AND RESPIRATORY DISEASE

While the casual relationship between smoking and chronic obstructive lung disease has not been established, the evidence at hand incriminates cigarette smoking in the development of chronic bronchitis, frequently the fore-runner of irreversible lung disease.

Cigarette smoking, and to a lesser extent other forms of tobacco smoking, are generally agreed to be associated with mortality from lung cancer. The question is whether there is a cause-effect relationship.

If there is merit to the hypothesis that cigarette smoke, by its effect on the epithelial defenses of the respiratory tract, provides a local environment for carcinogens, it would be meaningful to find that there is an association between lung cancer and chronic nonspecific respiratory disease (asthma, chronic bronchitis, obstructive pulmonary emphysema).

Certain epidemiologic similarities between lung cancer and chronic nonspecific respiratory diseases may be noted from mortality statistics. Both have shown an epidemic increase in Canada, the United States, and England and Wales. Both have a similar urban-rural differential mortality and a predilection for men and for persons in middle age.

## RELATIVE RISKS OF RD

The most widely reported prospective studies of smoking have demonstrated that the relative risk of death from the chronic nonspecific respiratory diseases is many times higher in cigarette smokers than in nonsmokers.

Population surveys of chronic nonspecific respiratory disease prevalence have contributed to our knowledge of the relationship of these diseases to current cigarette smoking. Through a standard questionnaire and simple pulmonary function tests, chronic respiratory disease can be identified and classified, and related to other variables under study.

In the 1961 survey of Berlin, N.H., the prevalence of chronic bronchitis was found to increase consistently in men and women with increasing cigarette smoking habits up to a five-fold increase for those smoking more than two packs a day. Similar smoking-intensity gradients of disease were noted for the signs and symptoms of more severe obstructive lung disease.

A number of geographic comparisons of chronic respiratory disease prevalence indicate that differences in population smoking habits parallel differences in disease prevalence. The situation is not so simple. In the Berlin survey the combined effect of age and current cigarette-smoking intensity was found to have a significant relation to chronic bronchitis and obstructive lung disease. This was observed in men, not in women.

Age-smoking intensity specific rates should probably be used in geographic comparisons, though even this may be inadequate because of observed geographic differences in practices of inhalation and length of cigarette smoked.

The respiratory disease prevalence in Berlin was recently compared with that in a small rural town, Chilliwack, British Columbia. The prevalence of chronic bronchitis in men 25 to 74 was only 21.5 per cent at Chilliwack compared to about 30 per cent at Berlin. When age and cigarette-smoking intensity were simultaneously taken into account, the observed prevalences of chronic bronchitis and obstructive lung disease in Chilliwack were not found to be significantly different from those predicted from the experience at Berlin. Thus, for these two populations surveyed in a similar manner and by the same workers, the urban-rural gradient for the chronic nonspecific respiratory diseases in men can be explained by age and smoking differences.

## AGE AND SMOKING FACTORS

This overwhelming contribution of age and smoking to the prevalence of chronic nonspecific respiratory disease can obliterate a less powerful effect of another variable in studies of small samples. Perhaps a smoker so pollutes the air which enters his tracheobronchial tree that the biological effects of other sources of pollution are not readily apparent.

The question arises whether simple bronchitis is really a disease. Can such a condition, which affects 20 to 40 per cent of the adult American population, be of much pathologic significance? Most persons who have chronic bronchitis and who smoke either lose their bronchitis or have a marked reduction in their daily phlegm when they stop smoking.

This chronic productive cough is related to pathophysiologic changes in the tracheobronchial tree — tobacco smoke interferes with ciliary action, slows the flow of the mucous blanket, and changes the consistency of the mucus. Smoking has been shown to be associated with a hypertrophy of the bronchial mucous glands with cellular abnormalities in the tracheobronchial epithelium which appear to decrease when smoking stops; some cellular changes, however, appear to be related to age, sex, and residence (urban and rural), as well as to cigarette smoking habits.

Though many studies of cigarette inhalation have failed to show any effect on mechanical factors of respiration in healthy subjects, in a recent study, a 25 to 30 per cent decrease in airway conductance has been reported immediately after inhalation of cigarette smoke; this bronchoconstriction occurs similarly in both smokers and nonsmokers, is rapidly reversible and recurs after a second cigarette. The inhalation of a pharmacologically inert submicronic particle can produce this reaction, which is likely mediated through the vagus nerve.

The evidence points to the fact that smoking is the most important, though not the only, factor in the production of simple bronchitis, and that with time bronchial obstruction is produced; initially this obstruction is probably reversible, but with

further exposure more serious irreversible obstructive disease of the lung is produced.

From the epidemiologic study at Berlin, it was found that the point at which the relative risk of chronic bronchitis and obstructive lung disease doubled in smokers over that of those who had never smoked cigarettes was somewhere between 3,000 and 6,000 packs of life-time smoking. This is the equivalent of eight years of smoking at the rate of a pack a day.

At the moment, epidemiologic, pathologic, and physiologic evidence incriminates cigarette smoking in the production of chronic bronchitis, though not solely so, for nonsmokers also have this disease.

What should be the public health action to deal with bronchitis? Certainly, control of air pollution will contribute somewhat. But bronchitis is clearly related to another form of air pollution which is self-induced — tobacco smoking. It seems inefficient to plan an effective control program which does not attack the practice of cigarette smoking first.

—Donald O. Anderson, MD, American Journal of Public Health, November, 1964.

#### NOTICE TO ALL CONTRIBUTORS

The deadline for items to appear in the following issue of the JOURNAL is the 10th of the month. The JOURNAL goes to press on the 12th.

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**Bronchogenic Carcinoma Simulated by Metastatic Tumors** — S. Trinidad, J. R. Lisa (Flushing, NY), and M. B. Rosenblatt, Cancer 16:1521 (Dec) 1963.

A study of ten autopsied patients with secondary pulmonary tumors showed that the tumors had been erroneously diagnosed as bronchogenic carcinomas on the basis of clinical manifestations confirmed by cytological examinations or biopsy. The incidence of pulmonary metastases from primary cancers, difficult to detect clinically, was found to be significantly high. There were 116 (40.9%) pulmonary metastases in an autopsy series of 317 carcinomas. Metastatic lesions, particularly those involving bronchi, may produce clinical and histological findings compatible with the diagnosis of bronchogenic carcinoma, and positive differentiation may not be possible without autopsy. Simulation of primary lung cancer by secondary growths may occur with greater frequency than is generally suspected.

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(Please help us keep these addresses correct, by notifying the Editor of any changes).



## THE NEBRASKA STATE MEDICAL JOURNAL

## WHERE'S ALL THY LUSTRE NOW?

There are things we must not say. They are whatever is critical of motherhood, patriotism, and religion. If we believe they are true, we do not say them. The majority has always laughed at, and has won over the small efficient minority. Ibsen had something remarkable to say about this. The majority, he wrote, has never been right. It has never been enough for the multitude to win, by force of numbers, over the few; it has always been necessary for them to punish (as they do abroad now, for thinking "wrong thoughts") and to gloat. And so the torturers of Gloucester said, when they had put his eyes out, "Where's all thy lustre now?" "All dark and comfortless," said Gloucester. We may speak of "the great unwashed" disparagingly, or we may think vox populi vox Dei. It may not be important. But when we see the crowds in the square and the dictator on the balcony, we know the truth. Ibsen was right, of course. To be defeated at the polls is no disgrace. In our hearts we know we are right and we will say so, loud and clear, as loud as Galileo's whisper as he was about to be burnt at the stake for saying the earth moves and he could not, for the life of him, keep silent, and said it does, too, move.

What is the voice of the people? It can be the Mets in last place and they succeed financially. It is the singers who admit they can do better, but they know "what the public wants." And it has become the completely irrational and greatly exaggerated cry for Medicare. It is the voice of political expediency and has not the ring of truth. The grocer does not reduce his prices according to one's age, nor does the clothier, nor does the landlord. Strong central government sounds good to those who do not think, but as central government gets strong, the governed become weak. "Do we need elections?" asked Castro, and the people roared "No!" Well, with Stevenson's young complainant, we "get up at night." No one

else does. We charge less when our patients are poor. No one else does. We work without recompense when necessary. No one else does.

We want the best, says the public. But they have always had it, and while we may not always say what we think, we ought to be able to say they do not deserve it. In England, medical students no longer come from doctors' homes. And here and there, while it may not be fashionable to say so, they are not always the top students they once were. Where pupils interested in mathematics and physics once entered medicine, those attracted to medicine now seem to study physics and math. Well, we have had nonphysicians foisted on us. We, and we alone, now feel the heavy thumb of governmental dictatorship. Things change, but of all the wonderful sayings that have well stood the test of time, the best is this: you get what you pay for. If the medical care of this country suffers, those who have brought it about can hardly be unaware of what they have done. Perhaps they will pay for what they get. Our medicine has been the very finest in all the world. It should not become a political tool.

Long ago, slaves were doctors. The joke is too obvious, and far too serious. Our tormentors' demands have become unconscionably arrogant and humiliating. It has been said that the AMA is our union. But when do we get time-and-a-half or double-time for overtime? Or portal-to-portal pay? Or our birthdays off? Or a forty hour week? Or thirty? Or twenty? Or free medical service for our families? Or for us? When do others charge less because the patient is poor? When does anyone else charge what the government tells him to charge? And are we not labor? Do we not work with our hands? In God's name, what are we, but labor? But our fees become fixed, and our charges are reduced; others' strikes never stop and they force the price of everything to rise. And they remind us that *we* are

doctors and may not strike. They rebuke us for our ethics on the one hand, and they remind us of them on the other.

But we retain our dignity. The image of the doctor, as *we* see the image, is what is important. We are every inch the doctor we once were, and a great deal more. We are not the doctor in the old picture, bringing comfort and little else to the sick child. Our surgery is bolder, our medicine more specific, our therapy more successful. And our ethics never better.

F.C.

### NEW YORK, NEW YORK

Dr. James Z. Appel, of Lancaster, Pennsylvania, was inaugurated as President of the AMA at the opening session of the House of Delegates, at the 114th AMA Annual Convention in New York City. Dr. Charles L. Hudson of Cleveland, Ohio, became President-elect. Dr. Tinsley R. Harrison of Birmingham, Alabama, won the 1965 AMA Distinguished Service Award, for work in cardiovascular diseases.

The issue of nonparticipation under any "Medicare" law appeared in nine resolutions and in Dr. Appel's inaugural address. The House stated that it is each doctor's "obligation to decide" if the "conditions of a case for which he is about to accept responsibility permit him to provide his own highest quality of medical care." The House adopted a substitute resolution, stating that we pledge ourselves to continue our "search and activity, in whatever social environment may develop, to secure or to restore the freedom, high quality and availability of medical care which has been traditional in our country." When legislation has been determined, the House will review the effect of the law and take what action is considered necessary. This action must in no way be interpreted as a change in Section 6 of the AMA's "Principles of Ethics," which states that a physician should not allow his services to be disposed of "under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judg-

ment and skill or tend to cause a deterioration of the quality of medical care."

An offer was made to President Johnson, offering to meet with him, asking the government branches to seek the advice and assistance of physicians; the AMA will intensify its efforts to modify pertinent legislation, and will keep all physicians informed during the coming months.

In relation to the President's Commission on Heart Disease, Cancer and Stroke, the House pointed proudly to the strides made under existing patterns of research and practice, and favored extension of these patterns instead of replacing them with a complex of medical centers and satellites. The House referred to the Board of Trustees a resolution requesting the AMA to caution the public against discontinuing voluntary health insurance policies because of pending legislation. It reaffirmed its policy relating to the practice of anesthesiology, pathology, physical medicine, and radiology.

More than 1100 members attended the 42nd annual convention of the Woman's Auxiliary to the AMA in New York City. The Auxiliary's annual contribution to the AMA-ERF amounted to \$320,121.87, for which the ladies deserve our thanks. In addition to all that money, they brought 500 children with them.

—F.C.

### A NEW DISEASE: CARTAE OBESITAS (OBESITY OF THE CHART)

We have become dismayed, and have said so, by unaccountable and irresistible tendency for the hospital chart to get bigger. The disease seems to have appeared some five or ten years ago; it was reported in 1963. It consists of a larger and ever-growing chart. Only where it seemed to become larger each year, its growth has now become logarithmic and is easily apparent with the passage of only months or even weeks. The symptomatology of the disease consists of new page after page satisfying some relatively nonexistent need, and of a hospital record that is thick, disordered, and



unfortunately uninformative. The etiology is not hard to find; it is caused by overly busy (or not busy enough) individuals with a thirst but no talent for inventing, and with the idea that any sort of change is progress. The course of the disease is unhappily progressive. The syndrome consists entirely of the "let's make a new page" compulsion. The prognosis is poor, but may not be entirely hopeless. Two indices are easily applied to the course of the disease. One consists of the number of different sheets now included in a hospital chart. A simpler index is the number of pages from the top that locates the graphic sheet. Where this informative page was once "tops" in the chart, it is now commonly found in seventh place.

New pages are now being added at frightening speed. Many of them add nothing to the chart but the number of pages; they duplicate what is already there. In fact, when there are two places to enter what is often important information, both are sometimes left blank, simply because there are two places, (occasionally even three) instead of one.

A strange new addition to the chart is the undated and unsigned note that is now and then found taped to the front of the chart holder. This is typical of most unsigned notes; the message is often inaccurate, needless, and irritating.

The therapy of this disease is threefold. First, have it understood that adding a page is not only of no advantage, it is distinctly undesirable. Second, make it necessary to clear with several committees before adding a page. And third, teach everyone to fight that "add a page" impulse.

The chart seems to grow with the years, as I do. But I keep hoping it will grow thinner, as I should like to do. And so I find myself dreaming of the perfect chart: two pages, one for the nurse and one for me.

And one for the "path" reports. And one for the X-ray reports.

Well, here we go again.

—F.C.

## THE DISEASE THAT NEVER WAS

Deus ex machina is a wonderful phrase describing something that appears suddenly, and unexpectedly solves a problem that has until then seemed incapable of solution. We have forgotten not only the words, but their meaning today, while we speak of serendipity, which refers to the stumbling on a happy discovery by pure chance. Serendipity is not new but its usage is, and the other expression disappears from our writing. It is too bad, because if there is a shade of difference in the two meanings, it is not large enough to have invented the one and buried the other. But memories are short. It is said that the same moving picture can be shown every seven years and no one will care. The youngsters will not have seen it before, and the rest of us will not remember. So it is with words, and songs, and even with ideas. When the student chided the professor for asking the same examination question every year, he was told, "In economics we never change the questions, we change the answers." "When I use a word," said Humpty Dumpty, "it seems just what I choose it to mean — neither more nor less."

Something like three quarters of a century ago, sudden and unexpected death during anesthesia and surgery was attributed to status thymicolymphaticus, later called status lymphaticus. The British Hyderabad Commission studied these deaths for two years and found that they were many, but that no physician ever had a second case. Whereupon they discarded the entire concept, indicating that careful watching of the patient was important, not the thymus gland. But ideas die hard. Status periculosis came next, then syncope, and after that we had cardiac standstill, and asystole. Today we speak learnedly of cardiac arrest. That every patient who dies has an arrest of the heart goes without saying; this is not at all the greatest fault we find with this phrase. That the words are meaningless is obvious. That their idea is old is common knowledge. And that there is no such disease should be known to us all. Perhaps this knowledge is more common than is generally supposed. It reminds us of the story of



the emperor's clothes, where everybody knew the truth, but no one spoke out.

Sound hearts do not stop "between two beats." If there is such a disease, what is the pathological process, wherein lies the etiology? The 1901 report pointed out the fact that no one ever reported two cases, and everybody knew why. Good hearts do not stop without cause or without warning. Cardiac arrest in the operating room is not a disease, it is not a diagnosis, it is a time-worn defense. It would seem proper to remove from the list of diseases one that does not exist, and to refer to "cardiac arrest" on the operating table more properly, as the "index of inattention."

Apparently, when we cannot invent new diseases we invent new names. "They do certainly," Plato said, "give very strange and new-fangled names to diseases." The French have a wonderful way of saying it: the more change, the less change.

—F.C.

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## News and Views

### How Wholesale Drug Prices Change—

The Wholesale Price Index for Ethical Pharmaceuticals has now declined for six consecutive years. Setting the 1949 index at 100, it has fallen from 93.0 in 1958 to 86.2 in 1963, and to 86.0 during 1964. The Government (U. S. Bureau of Labor Statistics Wholesale Price) Index declined similarly, from 100.1 in December, 1960, to 94.8 last December.

### The Hospital Bill—

We note that the Wisconsin Radiological Society voted in May to bill patients for professional services. Coming at this time, while the government goes merrily on, in another direction, and with considerably more force, we can only wish that they had done this earlier. It is right to lock the barn door, but it is better to do it when there is something left to protect. But our hearts are with them, and we wish them well.

### Fluoridation of Public Water—

The Council on Foods and Nutrition and the Council on Drugs of the AMA have declared, in a joint statement: "Fluoridation of public water supplies so as to provide the approximate equivalent of one part per million of fluorine in drinking water has been established as a method for reducing dental caries in children up to ten years of age." Available evidence suggests that this method diminishes the incidence of dental caries in childhood, that there is also a reduction in the rate of caries up to at least 44 years of age, and that continuous ingestion of water containing the equivalent of approximately one part per million of fluorine has not been shown to be harmful. Mottling of tooth enamel is "minimal," while its importance is outweighed by the caries-inhibiting effect.

### Relief of Tension Headache—

Tension headache (frontal, occipital, or temporal) was studied in 30 patients and has been reported by Dr. Richard C. Proctor in *Psychosomatics* (6:107, 1965). A double-blind, cross-over study demonstrated effective and safe relief by the "tranquilizing, muscle relaxant and analgesic properties of Trancogesic." Most of the patients had tried other medication without success; 19 of them obtained fair to excellent relief while taking Trancogesic, only eight reported pain relief when taking placebos.

### Free Care for Seamen Not Necessary—

The AMA Committee on Federal Medical Services says that the provision of free medical and hospital care to American-flag merchant seamen is no longer a proper function of the federal government. "Maintenance and cure" of seamen who become disabled or ill during a voyage is the shipper's law-of-the-sea responsibility.

### A.A.—

The number of A.A. groups in the world has increased by 6.7 per cent during the past year. In the spring of 1965 there were 11,752 groups in 90 countries throughout the world.

# Urinary Stress Incontinence

(Extension of the Indications for the Ball Operation  
and Recent Modifications in Technique)\*

**U**RINARY stress incontinence is one of the most disturbing benign conditions of the female genital tract. Lethal only insofar as it embarrasses the patient and curbs her social activities; it can, nevertheless, prompt the patient to seek relief even in its mildest form. Unhappy is the patient whose first operation fails to cure her incontinence. Really unhappy is the patient with no incontinence prior to vaginal surgery who becomes incontinent after one of the many vaginal plastic procedures currently utilized by gynecologists.

Complete urologic study of these patients will make it possible for the surgeon to plan and select the operation of choice for each patient. The first operation should effect a cure; not set the stage for subsequent operations. The purpose of this report is to suggest a routine of study of the incontinent patient prior to surgery and the selection of an operation designed to effect a cure at the initial endeavor.

## Pathogenesis of Stress Incontinence

Incontinence of urine on stress occurs when, during a sudden increase in intra-abdominal pressure, the force transmitted to the bladder exceeds the resistance offered by the proximal one-third of the urethra. The portion of the urethra involved is that superior to the urogenital diaphragm. This has been demonstrated by cinerentgenographic studies as well as having been recognized by clinicians for many years who have seen the distal urethra removed by trauma or surgery and the patient remain continent. Normally, whether at rest or during stress, the pressure in the functional segment of the urethra is higher than that in the bladder.

Could it be that part of the efficacy of a bladder neck plication is a result of lysing

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the distal third of the urethra from the urogenital diaphragm? I feel it is quite possible that this permits the distal third of the urethra to function to some extent like the proximal urethra although it could not benefit from an increase in pressure, and therefore resistance, to the same degree. Nevertheless the urogenital diaphragm (triangular ligament) should always be lysed during an anterior colporrhaphy whether for demonstrable stress incontinence or a prophylactic plication.

Enhorning has done some excellent studies on closure pressures by means of a series of small balloons placed in the bladder and urethra. Simultaneous tracings of the pressures in the bladder and urethra are recorded at rest and with the patient coughing to increase intra-abdominal pressure. *Closure pressure* is defined as the difference between the simultaneously measured highest intraurethral and bladder pressures. Patients are continent as long as closure pressure remains above zero.

Intravesical pressure in normal subjects ranges from 10 to 60 centimeters of water. It rises about 100 centimeters of water with a moderate cough, both measurements taken in the erect position. The pressures are less in the prone position. The intra-urethral pressure at rest and in the erect position

\*Read before the Tenth Annual Fall Scientific Session of the Nebraska State Obstetric and Gynecologic Society, December 5, 1964, Las Vegas, Nevada.



ranges from 50 to 135 centimeters of water in that portion of the urethra 1.5 to 3.5 centimeters from the urethrovesical junction. Closure pressures therefore range from 25 to 85 centimeters of water.

The important thing these studies show is that any stress that increases intravesical pressures is likewise transmitted to the proximal (intrapelvic) portion of the urethra and keeps closure pressure above zero in continent patients. In incontinent patients there is an interference with this mechanism so that intravesical pressures exceed the intra-urethral pressure and urine escapes. What are the anatomical changes that may produce this reversal of the normal relationships?

First, and probably most common, the trauma to the paraurethral supports during childbirth are sufficient to change the physiology of the bladder-urethral pressures. The puborectalis is torn near its insertion into the paraurethral tissues, the bladder neck is displaced downward and forward, and scar tissue may fix these structures in an abnormal relationship incompatible with continence. The bladder neck, fixed and scarred, may now be unable to increase the intraurethral pressure to counteract the increase in pressure occurring in the bladder. Further, functionally, the proximal urethra becomes incorporated into the bladder as the funnelling increases. Some investigators place great emphasis on the length of the urethra and they are correct. However, I feel it is more accurate to describe the area of the proximal urethra subject to stress and which can increase its tension rather than a simple measurement of length.

Iatrogenic stress incontinence should be a rarity when all vaginal surgery is done by gynecologists. Unfortunately, many of the multiple operation patients were continent before a vaginal plastic procedure or vaginal hysterectomy. Failure to recognize the change in the posterior urethrovesical angle that occurs during the dissection, and failure to perform a prophylactic plication during vaginal hysterectomy results in a number of incontinent patients. Bladder advancement procedures are notorious for

creating urinary incontinence. The majority of failures, however, occur because the surgeon applies a simple Kelly-Kennedy type of bladder plication to patients who need an operation of the combined type that fulfills all the physiologic requirements for cure.

### Classification of Stress Incontinence

Unless surgeons have some common denominator in assessing the severity of stress incontinence the results of their operations are meaningless. A cure recorded for a slender multipara with slight incontinence undergoing a simple vaginal plastic is much different from recording a cure for a short, squat, obese, nullipara with bronchiectasis and congenital incontinence who has had two or more previous surgeries for the condition. The senior author has used for many years his simple classification based on the degree of incontinence, function of the pubococcygeus and the presence of aggravating medical factors. All this can be done as an office procedure and has proved a reliable guide in the management of these patients. The basis of the classification is simple and the observations necessary are listed below.

#### Basis of the Classification

1. *Frequency and degree of incontinence.*
2. *Function of the pubococcygeus.*
3. *Presence of aggravating medical factors such as:*
  - a. *Obesity*
  - b. *Chronic coughs*
  - c. *Bronchial asthma*
  - d. *Hay fever*
  - e. *Bronchiectasis*
  - f. *Diabetes mellitus*
  - g. *Neurological complications*
  - h. *Radiation changes in vagina and bladder base*
  - i. *Other similar medical factors*

Utilizing these observations it is possible to classify most of the patients with stress incontinence into four groups. Then, the type of operation selected for the patient can be determined.



## Classification

### *Class O — Potential Incontinence*

1. *No incontinence.*
2. *Bladder neck unintentionally deranged during surgery.*
3. *May have aggravating medical factors.*

### *Class I — Dysfunctional Incontinence*

1. *Moderate loss of urine on occasions with stress.*
2. *Pubococcygeal function present but inadequate.*
3. *No aggravating medical factors.*

### *Class II — Aggravated Dysfunctional Incontinence*

1. *Frequent and gross loss of urine with stress.*
2. *Pubococcygeal function present but inadequate.*
3. *Aggravating medical factors compound the incontinence.*

### *Class III — Malfunctional Incontinence*

1. *Grossly incontinent; even in recumbent position.*
2. *Fixed, distorted, funneled urethra.*
3. *May have aggravating medical factors.*

Having classified the patient as to the type of her incontinence, the operation adequate for her dysfunction can then be determined. Class O patients should have a prophylactic plication, Class I patients a more extensive urethrolisis followed by a simple vaginal plication of the bladder neck. Class II patients require a thorough vaginal urethrolisis of all adhesions to the descending rami of the pubis combined with a suprapubic plication and suspension of the bladder. Class III patients require a complete vaginal urethrolisis of all the scar tissue, entering into the lateral recesses of the space of Retzius to be sure the urethra is free and mobile; and then, a suprapubic plication and suspension of the bladder.

### **Extension of the Indications for the Use of a Combined Operation**

In the chapter on stress incontinence entitled, "Progress in Clinical Obstetrics and Gynecology," by T. L. T. Lewis,<sup>2</sup> a contribut-

ing author states, "Following the failure of two vaginal repairs, and in some cases after one, an abdominal approach is indicated." To me this is the most backward and reactionary type of teaching and practice in the surgery of the female pelvic floor. It presumes that we have not progressed sufficiently in this specialty to the point where preoperative studies and tests will permit us to utilize the proper operation for a specific patient — that we must routinely try one procedure first, wait to see if it fails, and if it does, try something else. I hold that the patient is entitled to a primary procedure, even if more extensive and complex, that will ensure her a cure with the minimal chance of a failure.

Thus, I have extended the combined type of operation to many patients having their first surgery and who fall into the Class II classification. From a large experience I have found that this removes the uncertainty of success for all but a small fraction of patients with stress incontinence. And the failed cases are becoming more and more of a rarity as the diagnostic methods become more refined and the selection of the procedure best suited to the patient exactly appropriate.

### **Modifications in the Combined Operation**

The original combined operation<sup>3</sup> consisted of a vaginal urethrolisis to mobilize the urethra from below, a systematic plication of the bladder neck and closure of the anterior vaginal wall, usually without trimming, with interrupted sutures. This was followed by a mobilization of the urethra, bladder neck and anterolateral walls of the bladder in the space of Retzius, an anterior plication of the bladder neck and suspension of the urethra and immediate wall of the bladder to the periosteum of the symphysis. Reporting 69 cases in 1952 and discussing the morbidity I stated, "Even so, the effectiveness of the operation would seem to justify the morbidity." The first modification of the operation was to suspend the urethra and bladder neck to the rectus tendons rather than the periosteum of the symphysis and posterior interpubic fibrocartilage. It was felt that this would accomplish the same

results without the risk of periosteitis, true osteitis pubis, and chondritis. This proved to be the case and a report of 140 operations in 1963 shows an even greater percentage of cures.

It became more and more apparent that the anterior plication of the urethra and bladder neck in the space of Retzius was the effective mechanism in restoring a competent bladder neck rather than any type of bladder suspension. Thus, the suspension sutures are now placed in the anterolateral walls of the bladder, decreased in number to one or two, and considered useful only in the obliteration of dead space in the operative field rather than important in the surgical restoration of a continent bladder neck. Further studies of the physiology of micturition in the female may well indicate that any limitation of motion of the bladder is unphysiological and should be abandoned.

### Operative Technique

An anterior colporrhaphy is done to lyse any adhesions about the bladder neck and perform an effective plication to restore the posterior urethrovesical angle. This pertains whether the uterus is present, absent, or being removed during the surgery. Figure 1 illustrates the technique of opening the full thickness of the vaginal wall by sharp dissection. Allis clamps are placed on the urethral meatus and laterally at the folds of mucosa caused by the convergence of the deep and superficial fascias of the thigh as the urogenital diaphragm (triangular ligament) is formed. The full thickness of the vaginal wall is opened in retrograde fashion and by sharp dissection. (Plate 1, Fig. C).

The urethra and bladder neck are then extensively mobilized as shown in Plate 1, Figure D. The scarred remnants of the urogenital diaphragm must be lysed by sharp dissection. However, once the correct plane in the fragile areolar tissue of the paravesicum is entered, the vaginal wall is readily separated from the bladder wall unless extensive scar tissue is encountered from the previous surgery. When this dissection is completed the operator will observe that there is a straight posterior urethrovesical

angle with the bladder base, bladder neck, and urethra forming almost a straight line.

Figures H through L, Plate 2, illustrate the author's method of plicating the bladder neck to restore the posterior urethrovesical angle. A full-length plication of the urethra may be done if there is extensive relaxation. In most instances where there has been previous surgery this is not necessary. Usually two sutures are taken in the distal two-thirds of the urethra with 00 chromic catgut on a fine atraumatic needle. Then, two or occasionally three sutures of the same material are used for the plication of the bladder neck as shown in Figure L. The technique of placing these sutures is illustrated in Figures H through L. At exactly the bladder neck, the bladder wall is entered through approximately half of its thickness and well laterally on the patient's left side. (Fig. H). The suture is then brought across the midline to the right side. The gentle sloping of the antero-lateral walls of the bladder is a much better guide to placing this suture than any type of indwelling catheter bulb tugged upon to distort the anatomy. This suture is completed by entering the bladder wall to the left of the midline as illustrated in Figure J and then to the right of the bladder neck. (Fig. K). This has the effect of inverting the tissues in two layers. It could be done in two layers with a duplication of the sutures one over the other. Either way it effectively restores a distinct posterior urethrovesical angle. In Figure L, suture two is shown placed about one centimeter distal to the bladder neck, and suture three one centimeter proximal to the bladder neck.

Figure M shows the appearance of the urethro-vesical junction after this type of plication. The vaginal mucosa is then trimmed conservatively and closed with interrupted sutures of fine catgut. More often than not in patients with previous surgery, the vaginal wall should not be trimmed except for excising areas of scar tissue. Sufficient vaginal wall is needed to arch under the inferior border of the symphysis and adjacent descending rami of the pubis. Otherwise, the vaginal wall may retract and distort the relationship of the bladder neck,

proximal urethra and bladder base. The vaginal mucosa is then closed with interrupted sutures of 00 chromic catgut. I use an infant number eight Foley catheter in all vaginal operations. The patient may be taught to void around this small catheter and reduce her operative stay in the hos-

pital. A vaginal pack is placed in the vagina and removed the next day.

The abdominal phase of the operation may seem formidable to surgeons not familiar with the space of Retzius. In fact, it is ridiculously simple. Plate 3, Figure G shows

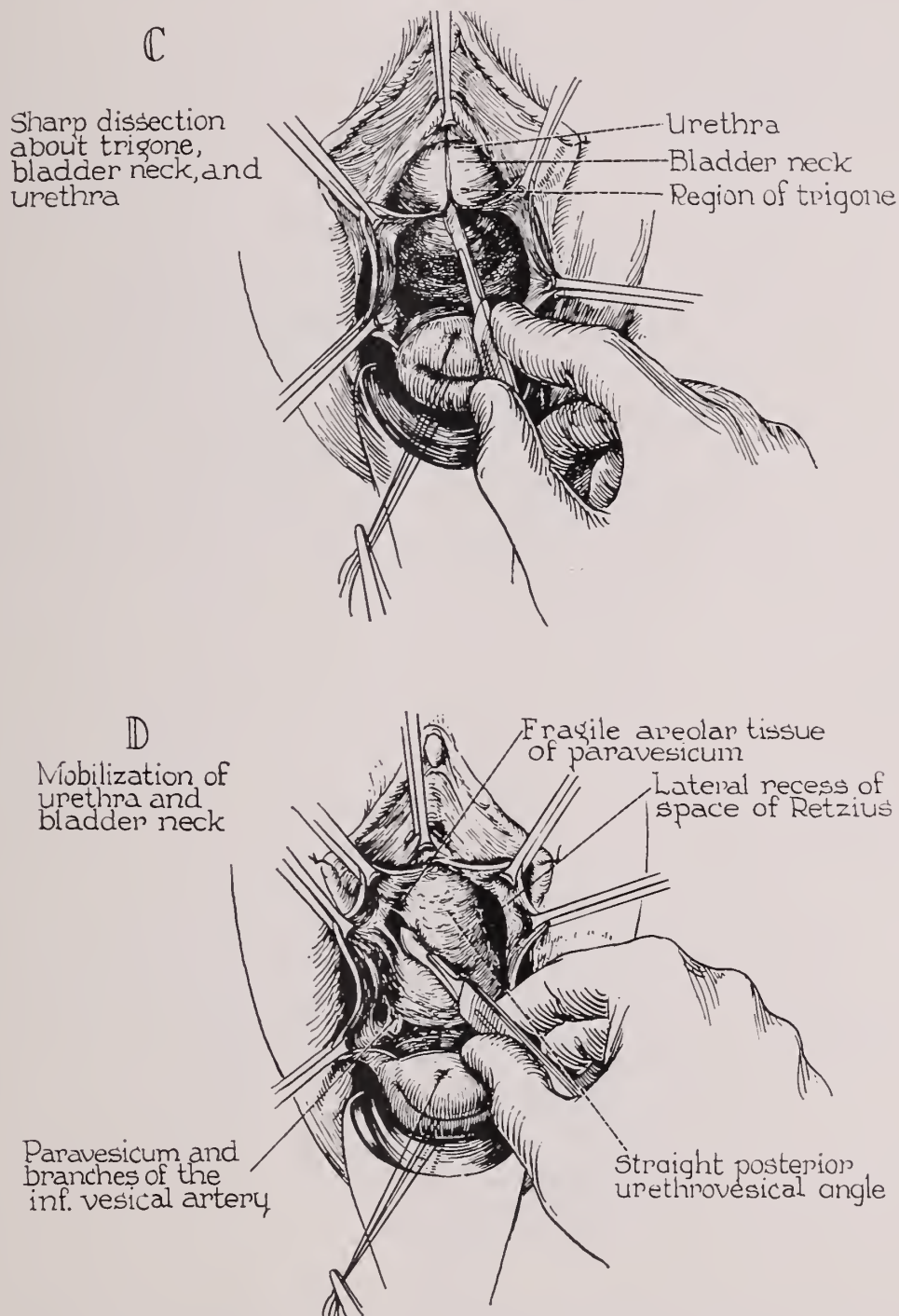
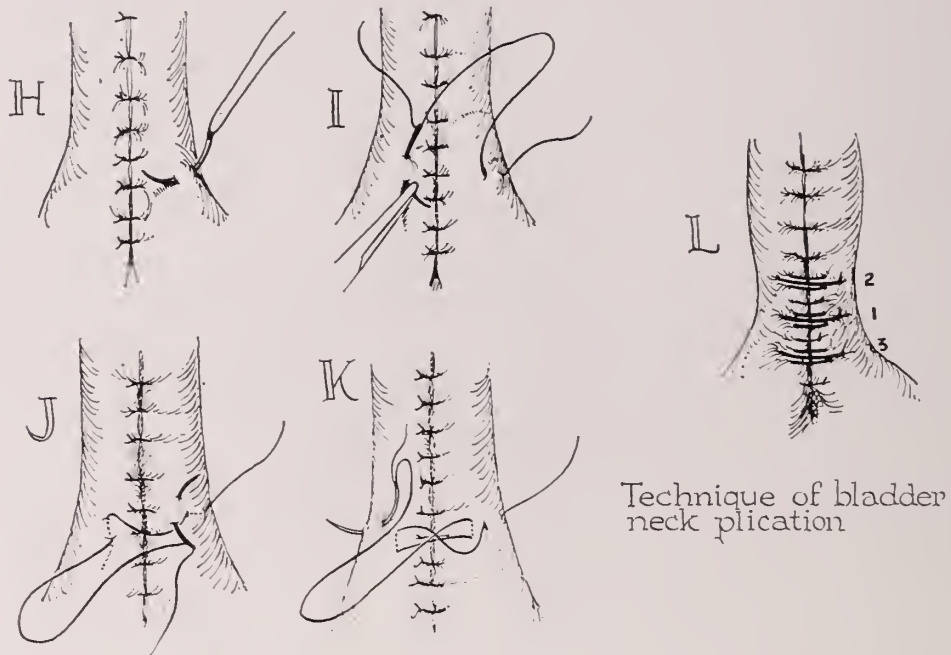


Plate 1, Figure C. The full thickness of the vaginal wall is entered by sharp dissection from the urethral meatus to the cervix. Figure D. Further sharp dissection will delineate the urethra, bladder neck and bladder base. The absence of a normal urethrovesical angle is apparent.



the space of Retzius entered and the antero-lateral walls of the bladder, the bladder neck and proximal urethra mobilized and the anterior plication of the bladder neck. After the urethra, bladder neck and the antero-lateral walls of the bladder are gently dissected away from the posterior border of the

symphysis, an anterior plication of the bladder neck is done. This is pliable tissue that has not been scarred by surgery or parturition. Sutures are placed to reduce the calibre of the bladder neck anteriorly at the bladder neck, about two centimeters distal in the urethra, and two centimeters proximal to the



Technique of bladder neck plication

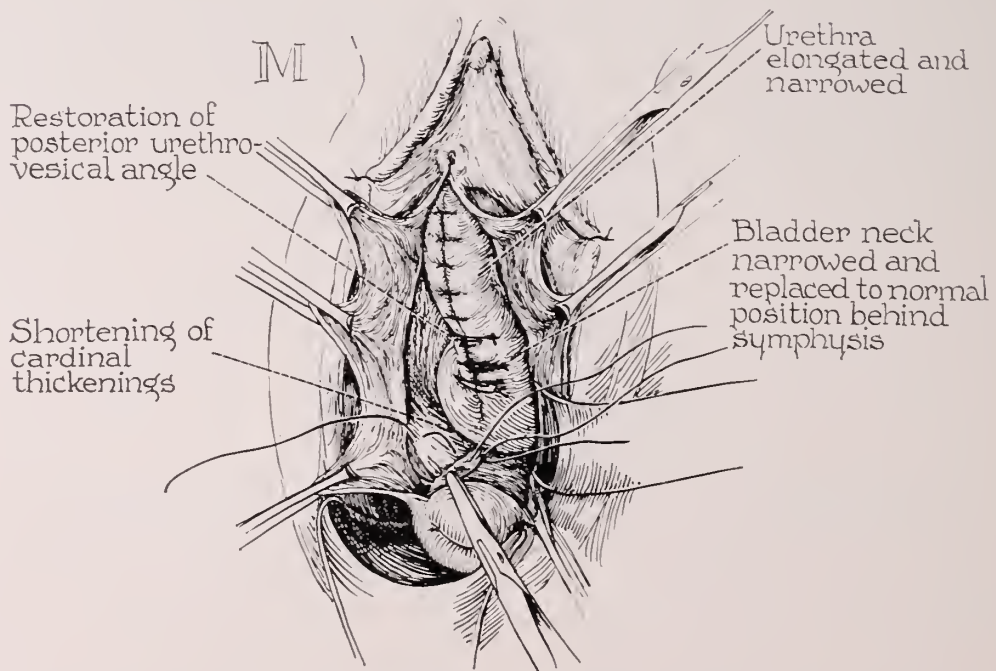


Plate 2. Figures H-L. Three on-end-mattress sutures effectively narrow the bladder neck. Figure M. Shows the posterior urethrovesical angle restored to its normal relationship.

bladder neck. This effectively narrows the bladder neck and makes a portion of the bladder adjacent to this critical area a functional portion of the urethra.

Plate 3, Figure H illustrates a method of suspending the anterolateral walls of the bladder to the rectus tendons to increase the

antero-vesical angle. The importance of these sutures is questionable since the bladder would rest in the same area in any event. However, an acute anterior urethro-vesical angle is formed with this simple maneuver.

The suspension sutures are brought through the rectus tendons without tension.

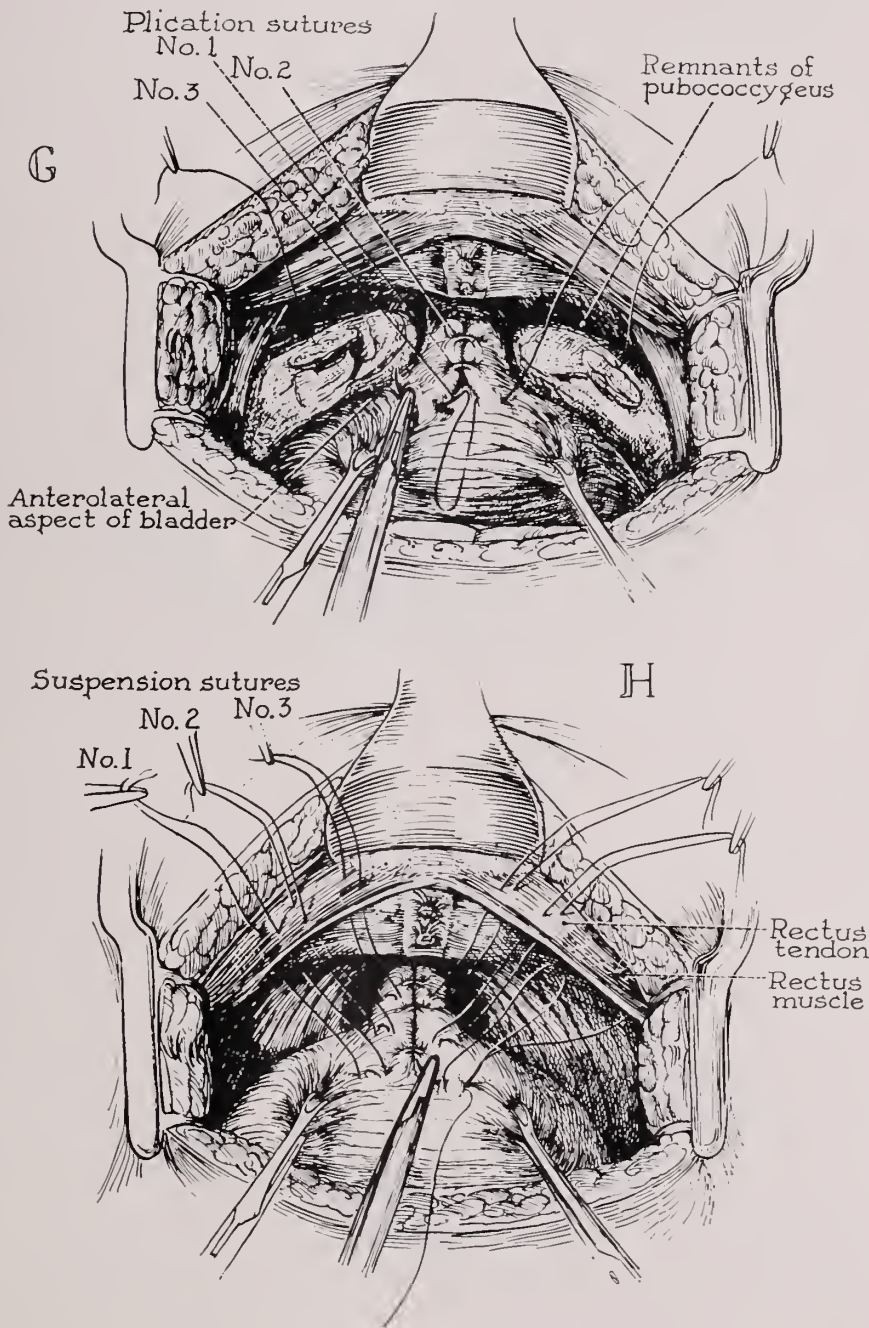


Plate 3, Figure G. The urethra and bladder neck have been dissected from their fragile areolar connections to the posterior border of the symphysis and adjacent descending pubic rami. Three plication sutures are placed in on-end-mattress fashion to narrow the urethra and create an anterior urethrovesical angle. Figure H. Suspension sutures are placed and passed through the rectus tendons on each side.



(Plate 4, Fig. I). Figure J shows the closure of the recti muscles with the cystopexy sutures in place. Drains are seldom necessary. The incision is closed in layers and I don't hesitate to use silk with the usual dry field in this operation although most urologists would shudder at such heresy.

A small group of patients operated upon in the past two years are reported to document further the efficacy of this operation.

You do not need a long follow-up to determine the success of your operation. Most of the failures are apparent three months after surgery. Late failures do occur but if the patient is closely followed and interrogated it can usually be determined that her primary problem — her incontinence of urine — recurred within a few months after her operation.

Twenty-seven patients had the combined

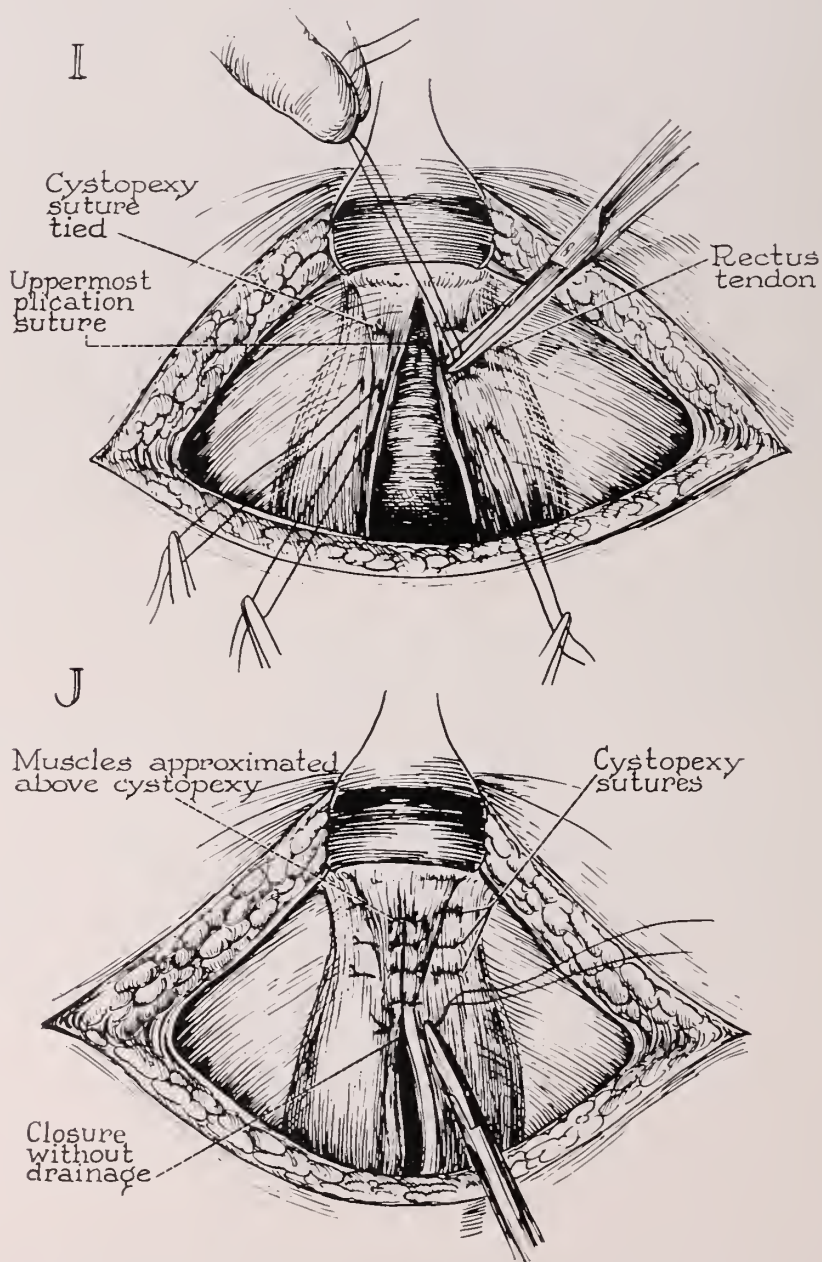


Plate 4. Figure I. The suspension sutures are tied, further accentuating the anterior urethro-vesical angle. Figure J. The recti muscles are approximated and the space of Retzius closed without drainage.



Chart 1  
RESULTS OF 27 COMBINED OPERATIONS

|                                               | Number | Cured |
|-----------------------------------------------|--------|-------|
| Class II (Primary Procedures) -----           | 12     | 12    |
| Class III (Previous Operative Failures) ----- | 15     | 15    |
| Total -----                                   | 27     | 27*   |

\*—100 Per Cent Cures

operation for urinary incontinence from February, 1963, to August, 1964. The shortest follow-up is three months. There were twelve primary procedures for patients for Class II incontinence. Fifteen patients had a Class III incontinence with previous surgery. There have been no failures among these patients. Despite the short follow-up I am quite confident on the basis of my previous experience that if they have complete control three months after surgery of this type it will be a permanent cure.

Chart 2  
TOTAL NUMBER OF  
MEDICAL COMPLICATIONS (27 PATIENTS)

|                                                 |    |
|-------------------------------------------------|----|
| Obesity -----                                   | 12 |
| Chronic Cough (all causes) -----                | 4  |
| Multiple Allergies, Asthma, Hay Fever, Etc. --- | 3  |
| Congenital Incontinence -----                   | 3  |
| Emphysema -----                                 | 2  |
| Diabetes Mellitus -----                         | 1  |
| Intracavitary Radium -----                      | 1  |
| Neurologic Complications -----                  | 1  |
| (Spinal Fusion After Cord Injury)               |    |
| Total Medical Complications -----               | 27 |

Some patients had more than one aggravating medical factor.

Chart II shows the total number of medical complications among all the patients reported. These aggravating factors are found so consistently among patients with severe incontinence or operative failures that they should be thoroughly explored in any patient presenting herself with a urologic complaint. Obesity is always the most common aggravating factor. When an obese patient presents herself with urinary incontinence, particularly if she is short and squat, the chances of a complete cure by a simple vaginal plication of the urethra are not good. Likewise, patients with chronic coughs and allergies that are going to be with them postoperatively are poor candidates for the simple procedures.

Chart III shows the type of operations among the Class III patients. In this series each patient had had one previous operation.

There were seven failures among those patients having a simple anterior and posterior repair. This operation should have rare indications in modern gynecologic surgery and many experienced surgeons have not performed this isolated procedure in years.

Chart 3  
PREVIOUS SURGERY CLASS III PATIENTS\*

|                                           |    |
|-------------------------------------------|----|
| Anterior and Posterior Colporrhaphy ----- | 7  |
| Vaginal Hysterectomy and Repair -----     | 3  |
| Vaginal Plastic Repair Followed by        |    |
| Abdominal Hysterectomy -----              | 3  |
| Manchester Operation -----                | 2  |
| Total Previous Operations -----           | 15 |

\*In this series each patient had one previous operation.

Vaginal hysterectomy or a vaginal plastic operation followed by an abdominal hysterectomy contributed six failures in this study. The Manchester repair, no longer popular in America, registered two failures. Unless one is present at each operation it is difficult to ascertain whether the bladder neck was prophylactically plicated as should be done in all vaginal surgery for benign disease involving restoration of the pelvic floor.

### Summary and Conclusions

1. The evolution of an operation for urinary stress incontinence and the underlying physiologic principles for its effectiveness are recounted.

2. The simplification of technique of this combined operation makes it possible to use this as a primary procedure in patients where a simple vaginal urethral plication would be destined to a high percentage of failures.

3. Twenty-seven patients with urinary incontinence are reported who have had this combined operation. There are no failures among this present series.

### Credit

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## A CLOSED CHEST

# Cardiac Massage Machine FOR DOGS

W. D. CORLEY, JR., MD\*

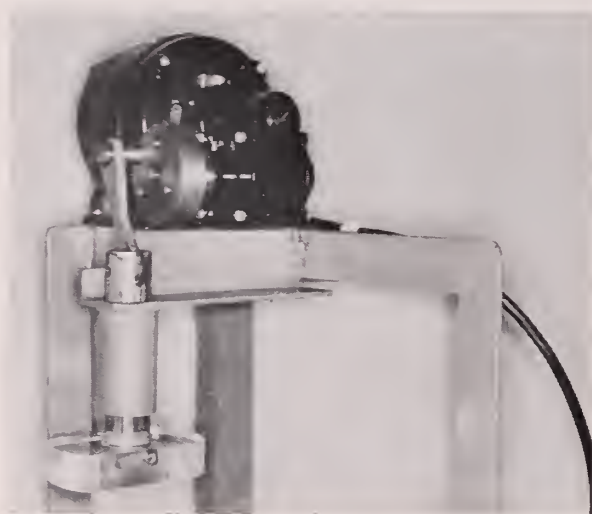
and

DONALD C. BOHLSSEN

and

JOHN R. JONES, MD

SINCE 1960 when closed chest cardiac massage was reintroduced by Jude, *et al.*<sup>1</sup> there have been several mechanical devices described for sternal compression, both for laboratory animals and patients.<sup>2-7</sup> These machines have been used to maintain constant massage for experimental purposes and to eliminate operator fatigue when used on patients.



A Closed Chest Cardiac Massage  
Machine for Dogs

A simple, efficient, constant and inexpensive closed chest cardiac massage machine, CCCMM, was desired for investigation of cardiopulmonary resuscitation in dogs. This paper describes such a machine with a resume of preliminary results.

### Procedure

The construction of the CCCMM is shown in the picture. A .084 hp (metric), 1725 rpm, 20:1 gear reduction motor with an output of 43 Kg. cm. torque at 86 rpm was used.

An eccentric was mounted on the output shaft with a connecting rod coupled to a plunger on which the pressure plate was fastened. The pressure plate was 6.4 by 11.4 cm. The amount of the sternal depression was adjustable by means of varying the radius of the eccentric, from 1.9 to 2.8 cm. The setting of 2.8 cm. gave a sternal depression of 5.6 cm. at 86 times per minute which was used exclusively in the studies.

The entire assembly was clamped to a V-shaped animal board so that the pressure plate in the up position depressed the sternum slightly. The pressure plate was centered over the sternum longitudinally, with the inferior edge at the xiphoid.

Mongrel dogs, weighing from 10 to 28 Kg., were anesthetized with 26 mg. pentobarbital per Kg. body weight. An endotracheal tube was inserted. Arterial blood pressure, by means of a catheter placed in the abdominal aorta and connected to a suitable strain gauge, and the electrocardiogram were recorded continuously. After establishing a normal baseline, ventricular fibrillation was produced by an electrical shock of 110 V. at 60 cps for 3 to 4 seconds with an electrode on each side of the anterior chest. One minute after the shock, a respirator was started at 6 l./min., utilizing air, and the CCCMM was started. Artificial circulation and ventilation were continued for varying periods of time until ventricular fibrillation was terminated by a DC defibrillator. When consciousness returned so that neurological damage could be evaluated, the animals were sac-

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TABLE OF RESULTS

| Weight | Arterial Blood Pressure<br>Systolic/Diastolic, mm. Hg. |        | Fibrillation<br>Duration,<br>min. | Pupils† | Shocks<br>watt-sec.          | Recovery‡      | Complications                                    |
|--------|--------------------------------------------------------|--------|-----------------------------------|---------|------------------------------|----------------|--------------------------------------------------|
| 18     | 140/100                                                | 65/40  | 15                                | C       | 100                          | S              | none                                             |
| 13     | 180/130                                                | 105/65 | 17                                | C       | 100                          | S              | hepatic subcapsular<br>hematoma                  |
| 28     | 175/115                                                | 50/0   | 20                                | C       | 100*<br>200*<br>300*<br>400* | *              | rib fractures                                    |
| 10     | 170/105                                                | 145/25 | 20                                | D       | 100                          | Died at 5 min. | pulmonary edema                                  |
| 15     | 175/120                                                | 80/25  | 23                                | C       | 100                          | Died at 6 hr.  | liver laceration<br>rib fractures                |
| 14     | 180/125                                                | 90/35  | 30                                | C       | 100                          | S              | rib fractures                                    |
| 19     | 200/140                                                | 80/40  | 30                                | C       | 100*<br>200                  | S              | rib fractures                                    |
| 15     | 160/105                                                | 85/35  | 30                                | C       | 100                          | Died at 2 hr.  | none                                             |
| 10     | 175/125                                                | 90/20  | 30                                | C       | 100*<br>400                  | S              | rib fractures,<br>slight myocardial<br>contusion |
| 18     | 175/135                                                | 60/25  | 31                                | C       | 100*<br>400                  | S              | rib fractures                                    |
| 15     | 195/150                                                | 60/30  | 31                                | C       | 100                          | S              | small liver<br>laceration, rib<br>fractures      |
| 19     | 185/130                                                | 80/35  | 46                                | C       | 100*<br>200                  | S              | rib fractures                                    |
| 17     | 190/135                                                | 85/40  | 113                               | C       | 100                          | Died at 4 hr.  | atelectasis, rib<br>fractures                    |

\*—defibrillation unsuccessful

†—pupil size; C is constricted, D is dilated

‡—S is survival until autopsy

rified and autopsied, usually 12 to 24 hours later.

### Results

The table lists the initial arterial pressure before fibrillation, the maximum artificial pressure during closed chest cardiac massage, the duration of ventricular fibrillation, the pupil size at defibrillation, the defibrillation shocks, recovery status, and complications. Dogs alive until sacrifice are shown as "survived." It can be noted that 12 dogs had constricted pupils at the time of defibrillation, indicating adequate cerebral perfusion. The amount of artificial pressure produced by the CCCMM had no correlation with the survival of the animals. All of the eight surviving dogs were alert and without apparent muscle weakness.

### Discussion

This machine gave consistent artificial circulation for long periods. The pressures produced might not be the maximum possible by closed chest cardiac massage because the stroke and rate were not varied for the individual dog, but the amount of

artificial circulation permitted over half the dogs to survive. Shorter stroke settings produced inadequate cardiac output in the size of animals used. Adjustment of the rate of compression could be obtained by substitution with an AC shunt motor and a variable power transformer.

Pulmonary edema was produced in one animal. Liver lacerations resulted in delayed death in one dog. Fractured ribs were found in nine dogs, but did not cause fatal damage. The results are comparable to data on survival of dogs in which a commercially available pneumatic pump was used.<sup>8</sup>

Prolonged massage with the CCCMM produced chest deformity. Fractured ribs were partly responsible; separation of the costochondral and chondrosternal junctions added to the deformation.

### Summary

A design for a simple and efficient mechanical closed chest cardiac massage machine for dogs is presented. When used on 13 dogs with ventricular fibrillation for 15



to 113 minutes, 12 were successfully defibrillated, and 8 survived.

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#### HUMAN EXPERIMENTATION

"During the past two decades, as the field of clinical investigation has rapidly expanded, there has been an interest in the clinical standards involved in the use of human beings as experimental subjects. The problem was high-lighted by the garish light of the Nazi atrocities revealed at the Nuremburg trials. As a result a set of rules was formulated to safeguard human experimental subjects against their rights as individuals. This set of rules became known as the Nuremburg Code and has been generally accepted by the Western world as reasonably safe and wise ethical standard . . ." (From book review of *Clinical Investigation in Medicine*; and *Anthology and Bibliography*, *Arch Int Med*, March, 1965, p. 628).

# "The Battle of The Experts:"

## A NEW APPROACH TO AN OLD PROBLEM IN MEDICAL TESTIMONY

### (Conclusion)

A Lincoln attorney emphasizes that "... no matter how theoretically independent the expert may be, he is always influenced by his own prejudice, predilection and peculiar background." The stigma of partisanship would remain unscathed because, as an Omaha attorney states, "... it is impossible to take the human element out of human affairs."

The blade conceivably could cut both ways—liberally for plaintiffs, or conservatively for defendants. As a Scottsbluff attorney asserts:

... apparently unconsciously, doctors often are influenced by their impression of the man they are examining wholly aside from the objective symptoms they may find. If they like the patient, they will give more weight to his subjective symptoms than if not.

Or as a Kearney attorney alleges, "... the panel of doctors would in all probability be conditioned to be conservative and defense minded by virtue of long standing procedures of Insurance Companies in defense of claims." A Norfolk attorney fears a snap, indifferent attitude by the panel. An Omaha attorney elaborates:

It should be kept in mind that any panel of doctors by the court would undoubtedly include physicians and surgeons on direct retainers with the large corporations such as the railroads, utility companies, etc., and who in the main would also be examiners for the life insurance companies. Under these conditions I doubt very much whether you could find very many people who would be willing to feel confident that they would obtain an unprejudiced opinion even though the examiner might feel that he "puts forth every effort to do so."

Even if an expert panel were initially impartial, many apprehend adverse, long-run tendencies. A Lincoln attorney warns that continuous examinations would tend "... to harden the panel and after a while they would tend to minimize the extent of the

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injury due to the nature of their work."<sup>143</sup>  
An Omaha attorney predicts:

From my experience I doubt that a panel of physicians could, after receiving the volume of cases now flowing through our courts, remain completely neutral. My real feeling is that a panel of such experts would initially be either a plaintiff in a personal injury action: however, I am positive that after a flood of matters was submitted to them, they would soon find themselves feeling that everyone was litigation-minded and perhaps, even unknowingly, become partial to the defendants ... It might work initially, but over a long haul would not prove satisfactory from either litigant's point of view.

A Scottsbluff attorney warns against the obstacle faced by doctors who have been conditioned by court appearances:

I do not believe doctors can obtain a dispassionate view of these matters or a judicial attitude overnight. We see lawyers who become judges take a long time to get a true judicial attitude and give up their approach as an advocate ... The difference between the mental attitude of an advocate and a judge is necessary, but hard to obtain. A doctor who does not do this regularly would probably continue to have an advocate's approach.

The counterargument first directs attention to the empirical results of the New York and Philadelphia plans.<sup>144</sup> Panel testimony has certainly not proved to be a one-way street favoring either side of the counsel table. The court-appointed expert has often discovered injuries not seen by the attending physician which have helped to increase the verdict. Secondly, even if the

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argument is taken at face-value, it is not of such consequence as to affect the recognized basic procedures in the practice of medicine. Moreover, ". . . it is irrelevant to the issues in this discussion. Impartiality, within the meaning of the plan, is complete lack of identification with the parties in a lawsuit."<sup>145</sup> If the Impartial Medical Expert meets this test, and is of the caliber that he must be to become a member of a panel, his examination, report, and testimony will serve the purpose intended in the plan. In other words, the *conscious* bias stemming from selection by and financial attachment to one party is completely eliminated.

The fact that *unconscious* or built-in bias cannot necessarily be eliminated is of no great concern. Safeguards can easily be instituted to guard against undue influence from doctors previously identified with one side. Several Omaha lawyers suggest that to mitigate the likelihood of drawing a doctor with an honest bias, the panel might be selected from a list of five or seven, each party having the right to strike a certain number. This would resemble a *voir dire* for the panel members.

A Nebraska Law School professor summarizes in one sentence the basic strength of the counterargument — "on balance it would be an improvement." The problem here is not whether the court-appointed panel system will produce absolute justice — nothing will do that. "The problem . . . is whether the plan will improve the chances of reaching correct and therefore just findings of fact on medical questions. To state the problem is to answer it."<sup>146</sup>

(3) *The panel system subverts the adversary system by embroiling the Judge in the controversy and through the jury's uncritical acceptance of the expert's opinion as medical fact.* The traditional judicial role of non-advocacy has long been established. In this regard the argument is occasionally advanced that the panel system pulls the judiciary into the adversary arena in that the judge, having selected a witness, becomes a party in the case and therefore is no longer qualified to impartially conduct the proceedings.

Close scrutiny reveals this argument to be based on fiction. No violation of the judicial role occurs because the judge simply does not select the panel member.<sup>147</sup> The judge merely calls upon the medical society to furnish an expert in the medical specialty involved. Under a confidential system, the judge neither knows the identity of the panel member in advance of his request, nor does he know the details of the expert's qualifications until he receives the report or accepts the testimony.<sup>148</sup>

The strongest criticism of all contends that our adversary system of deciding ultimate issues of fact is at stake in the panel solution to the problem. Once the jury knows that the expert is court-appointed, he will be seen as wearing a cloak of infallibility, and the jury will blindly accept his opinion as the ultimate medical fact. An Omaha plaintiff's attorney states the argument:

It is the duty and obligation of the bar as well as the bench of this country to safeguard zealously the preservation of the right of trial by jury and to be acutely aware as to any move which would ultimately make inroads upon the jury's prerogative of deciding the fact issues in every case . . . The appointment of a medical expert or panel would result in emphasis being placed upon the expert's court-appointed status to a point that would virtually make the court-appointed doctors the fact judges of medical issues.

The alleged disproportionate influence on the jury is regarded as inimical to the fundamental framework of the adversary system. An outstate attorney asserts that this is tantamount to making the judicially designated expert the *sole judge* of the issue in controversy and taking the administration of justice and the trial of cases out of the hands of lawyers and placing it within the medical profession." His testimony will "exude an almost ineradicable odor of sanctity."<sup>149</sup> The Editor of NACCA Law Journal argues that "it is unfair to pin a badge of honor on one witness as having the full confidence of the court and withholding it from another patently labelling him as undeserving of confidence."<sup>150</sup> A legal educator criticizes the procedure as an attempt to equate certainty and competency with truth:

The authority role of the expert witness who has been identified to jurors as a member of a judicially selected impartial medical expert panel



has been substantially enlarged. In the context of the courtroom setting, such identification may too readily be taken to mean judicial certification on two counts: (a) professional ability as determined by judicial examination, and (b) strict impartiality of the witness.<sup>151</sup>

Chief Justice White articulates the crucial distinction:

We are trying to adapt into the adversary system one of the devices that is many times an integral part of decision by administrative boards. Close cooperation and consultation between the experts on administrative boards in reaching a joint decision is probably an important thing when this method for determination of controversies is used. This will be either entirely or practically absent under an expert appointed system. We are dealing here with judicial procedure in which it is fundamental that the adversary system should have full play.<sup>152</sup>

In a larger context critics claim that the expert's usurpation of the jury's prerogative is a dangerous step toward erosion of the entire jury structure in our courts. The panel system is a formula-attempt at "slot machine justice" which is no substitute for twelve men "tried and true." An Omaha attorney asks, "If one carries the 'panel of experts' idea too far, then the next logical step is not to waste the time of highly qualified experts by trying to have them 'prove' their excellence to a jury of twelve average men . . .?" A North Platte attorney warns against roads headed toward "dishing out justice": "Should we not then also be required to have a so-called 'panel of experts' out of the total Bar so that trials involving personal injury cases may only be conducted by lawyers selected from such a panel? What does this do to the client's right to seek his own counsel?" Implementation of the panel system could only open the door to greater undermining of fact determination by the jury:

In a situation such as this, where the technical harm lies hidden deep under a cover of what might appear to be expediency, and the improvement of our plan of trial, it is necessary that the judges and lawyers . . . be vigilant to see that the wrong path is not taken up and followed away. First an Impartial Doctor. Then an Impartial Traffic Expert. Then an Impartial Safety Engineer. Don't you see where the thing that you and I call a fact question for the jury, is headed?<sup>153</sup>

The reciprocal argument first notes that the basic idea of the plan has been upheld under

the fire of constitutional objections.<sup>154</sup> The plan operates within the letter of the law because the Seventh Amendment is not a rigid command that old forms of practice and procedure be retained. Long ago Mr. Justice Brandeis expressed the limits of the Amendment:

It does not prohibit the introduction of new methods for determining what facts are actually in issue, nor does it prohibit the introduction of new rules of evidence. Changes in these may be made. New devices may be used to adopt the old institutions to present needs and to make of it an efficient institution in the administration of justice.<sup>155</sup>

Secondly, it has been argued that the panel procedure not only works within the spirit of the adversary process but actually develops and enhances the system by bringing to the fullest possible light all the medical facts for evaluation by the jury and judge.<sup>156</sup> The argument stresses that discovery proceedings and the right to take depositions with practically no limit on the scope of the inquiry also remove a case to some extent from an adversary proceeding. "The panel system is essentially a further extension of discovery proceedings. The use of a court-appointed expert adds an additional skill or aid to the fact-finding function."<sup>157</sup> It enables the Court and jury to more accurately evaluate the facts within the framework of the adversary proceeding. The panel expert's only function is to give medical testimony in keeping with scientific truths, and it would seem that the court and jury should have the opportunity to hear all such testimony.

Third, all of the traditional safeguards are still present to insure the full rights of the adversaries. Parties may still call their own witnesses, and the court-appointed expert is still subject to cross-examination, "the greatest legal engine ever invented for the discovery of truth." The claim that the right of cross-examination still exists has been said to ". . . ignore the litigative facts of life. . ."<sup>158</sup> As a Lincoln orthopedist explains, "The effect of court-appointment will not be overcome by cross-examination because it will be very difficult to impugn the integrity of a witness following his appointment by the court." But the contention

that a lawyer cannot effectively cross-examine a panel expert is fiction, not fact:

The fact is that with the arrival of the impartial witness there has returned to the trial arena the art of cross-examination . . . Cross-examination has two basic approaches, the attack on the merits and the collateral attack. Little mileage can be made with the latter when the lawyer is examining a court-appointed expert . . . The important thing is that a carefully conceived cross-examination, capitalizing on the impartial's objectivity, can serve the purpose history has ascribed to our system, the bringing out of the truth. Upon the merits of a case cross-examination of the impartial can be helpful and effective, helpful in discovering the truth and effective when compared with cross-examination of the professional who spends his life in the witness box.<sup>159</sup>

This abolishes most of the sparring between doctor and cross-examiner which is so distasteful to the medical profession. This removes the element of a game of chance from the litigation. Far-fetched theories are quickly discredited, and a greater burden is placed upon trial counsel to be well informed about current medical knowledge concerning the problem at issue.

The additional safeguard of proper instruction by the court helps to insure the rights of the adversaries. The court would instruct the jury that the court-appointed expert is to be considered as all other experts and the jury alone is the decider of the ultimate facts. Those espousing a sincere faith in the jury system could thus feel secure that the jury would do exactly as the bench has instructed. They would judge all experts on the merits, not because one talks more smoothly or because another is ". . . cloaked in the exalted robe of the court."

Concealment of court-appointed status from the jury has been tried, but it is deemed neither wise nor successful.<sup>160</sup> The same detriment applies to limiting the function of the court-appointed expert to pre-trial proceedings. If a panel of three or more doctors is used, the right to file minority reports would assure open forum for opinion exchange.

Finally the results in other jurisdictions should be noted. The New York and Philadelphia experiences particularly emphasize

the fact that juries in these jurisdictions have not followed a one way street when court-appointed experts testified.<sup>161</sup> Numerous verdicts have mirrored total rejection of the panel expert's opinion. The likelihood is not at all overwhelming that the expert's testimony will prevail solely because of its source and totally apart from its merit.

## VI. THE PRACTICABILITY OF A NEBRASKA PLAN

Though the majority of trial attorneys across Nebraska approve of the basic idea of a Nebraska Plan, many express doubt concerning its feasibility. A Lincoln attorney summarizes this view:

What is proposed, while admittedly desirable, is probably too idealistic to be practical . . . To adopt the suggested change I am afraid would put us in about the same position of the surgeon who reported a successful operation, but the patient died.<sup>162</sup>

Examination of the specific foundations for a Plan in Nebraska will allow insight into this prediction. The successful inauguration and operation of a Supreme Court Rule for the entire State or a local District Rule depends primarily upon three factors: (1) The selection of cases for reference to the panel; (2) the selection and cooperation of doctors and (3) the provision of funds to finance the procedure.

(1) *The selection of cases for reference to the panel — The province of the Judge.* A Beatrice attorney remarks that ". . . if limited to cases in the discretion of the judge, the plan might be very effective." The role of the judge is that of decision-maker as to which cases warrant panel examination.<sup>163</sup> The attitude of the judiciary, of course, plays a leading role in the success of the project. The statistical vote and comments of the Nebraska District Judges, and particularly those in the Lincoln - Omaha area (where no negative votes were cast), indicates great willingness to utilize a panel system in cases of widely opposed expert evidence.

The selection of the case should be made sufficiently early in the history of the litigation to permit accurate appraisal of the medical facts and at the same time facili-



tate settlement before trial. By the time of pre-trial conference, any disputes have usually reached a condition of relative maturity, so that the true extent of physical injury and its probable permanence can be accurately determined. Yet the event is not so long passed, nor the positions of the parties so firmly fixed that impartial examination will not have a settling effect as to the extent of damage. Thus, during pre-trial, with the lawyers for both sides before him, the issues clearly defined by the pleading and the medical reports of the doctors for both parties in his hands, the judge then decides whether the case is one of such sharp divergence of medical views as to justify the reference. *Consent of the lawyers should not be required*, but request for the panel should be encouraged. Once invoked, the trial justice or either party should be permitted to call upon the medical expert to testify at the trial.

(2) *The selection and cooperation of a sufficient number of qualified doctors to constitute the panel — the role of the Medical Societies.* The success of such a project is most dependent upon the existence and cooperation of the very experts which it professes to provide. The task of selecting these experts should be entrusted only to the medical profession itself. The experience in other jurisdictions,<sup>164</sup> is proof positive that doctors of high calibre are most willing, as a public and professional duty, to place their services at the court's disposal. The statistical polling of Nebraska's leading specialists overwhelmingly corroborates a cooperative attitude among doctors in the particular branches of the medical profession.

#### (a) Omaha-Lincoln Area

This existence of the two-city complex readily lends itself to a panel system though, of course, it would be on a miniature scale with fewer physicians assigned to the needed categories of specialty.<sup>165</sup> Once the local medical academies and societies have selected the names, tenure should be limited to assure "new blood" coming into the system and to avoid undue burden on a few doctors. An Omaha orthopedist points out that "This area with two medical schools and

their faculties would seem very suitable for this step." An Omaha defense attorney verifies this idea:

. . . I feel there would be cooperation, for in the metropolitan Omaha area we do not, as such, have a statutory county coroner . . . Therefore, Nebraska Medical School, Creighton Medical School, Douglas County Hospital, etc., furnish a medical coroner on a rotation basis to actually perform autopsies and the like. They are therefore conditioned and should be willing to furnish medical experts for the purpose.

Over 75 per cent of the attorneys in Omaha and Lincoln believed that local medical groups would cooperate.<sup>166</sup> Over 97 per cent of all the specialists polled concurred.<sup>167</sup> The acceptance was so enthusiastic in some medical quarters that many doctors went on to advocate extensions of the panel system.<sup>168</sup> A Lincoln orthopedist summarizes the view of the medical men:

I would wholeheartedly be in support of a Nebraska Project of "Expert Medical Panels" that would be utilized in a "Friend of Court" approach. Furthermore, I sincerely believe that the great majority of the medical men and professional medical personnel would be in favor of such a project.

#### (b) Outstate Area

Major manpower problems exist in the district courts outside the Omaha-Lincoln area.<sup>169</sup> Implementation becomes more difficult the further west one travels. A North Platte attorney illustrates the obstacles:

The suggested medical expert testimony project would be unfeasible in a small district such as the 13th Judicial District. The basic reason that such a project would not be successful is the fact that we do not have all the medical "specialists" in this area which would be necessary to have on such a board. In situations where we do have such a specialist, if a board were created for a district, we would have to take the resident specialist probably because he would be the only one available . . . In a small town if the specialist is reasonably competent, I would assume that the general practitioner would abide by the specialist's judgment. In other words, even a reasonably competent specialist would control the thinking of a board of specialists in other medical areas or merely of general practitioners in the community."

A Lincoln attorney states: "It would appear that outside of the metropolitan areas of Nebraska there would be problems in administering this program because of



the scarcity of qualified specialists.”<sup>170</sup> A Nebraska Law School professor summarizes:

The major problem outside the big city is in getting enough different doctors so that it would not amount to the same doctors deciding — (reporting?) — all cases. That would be bad from everyone’s point of view.

In addition, the further one travels out-state frictional problems with *local medical groups* grow more emphatic. A Grand Island attorney:

. . . it would be most difficult to secure acceptance by doctors out this way. They are all too busy and I seriously doubt if the local medical association would take the time to set-up the system or if the doctors would serve willingly. The few doctors who would or could take the time would be the least qualified ones. One would also have specific problems. For instance, there is one qualified orthopedist in our county and another in Adams County to the south. A case involving this field usually finds both men involved for one side or the other, and there would be little chance of cooperation between them.

A Kearney attorney:

I do not believe the competent MDs here would care for the plan, and the others would not be satisfactory. This is probably a good plan in the cities or federal courts.

A Scottsbluff attorney:

Basically, the medico-legal suggestion is good, but we are of the opinion that it would not work in a community of this size, but would work in the larger communities and cities . . . Our County Bar Association has had several meetings with the doctors, and so far, their general impression is that they have not been sold on the idea. For that reason, all of them would probably refuse to act on the Boards.

Another Scottsbluff attorney explains:

We have problems with medical testimony because doctors do not like to testify and don’t want to take the time necessary to adequately prepare themselves to testify.

In a community of this size (30,000), we have local specialists in only a few fields . . . The appointments under the system would gravitate either to the men who enjoy testifying but who are not necessarily the best qualified or the best qualified may be, and in some instances are, the worst witnesses.

Attorneys suggest two alternatives to alleviate the personnel and cooperation difficulties in these areas. First, a Blair attorney observes that “. . . in Nebraska it would be most practical to set up a medical panel in each judicial district rather than

having them set up by city or county. The panel should consist of specialists whenever possible.” A Minden attorney explains that:

“having the panel drawn from the entire judicial district rather than from the county in which trial is to be had would be the most feasible for districts composed of multiple counties. In average size and smaller counties we do not have much personal injury work, whereas there is some of this type of litigation in each judicial district. It would further give a large number of MDs from which the panel could be selected in the multiple-county judicial district.”

The second alternative is to bring the experts to the area requiring them. Such a “travelling panel” could be effectuated by having the plaintiff travel to the panel site for examination. The necessary panel member could travel to the place of venue to testify. Outstate attorneys currently use this procedure as a Kearney attorney verifies: “We use, extensively, orthopedic surgeons, neurologists and internists from Omaha, Lincoln, Hastings and Grand Island.” A Beatrice attorney: “. . . at least some specialists might have to be imported.” A Scottsbluff attorney: “. . . our best results have been by having the client, if we are representing the plaintiff, examined by his local doctor and one in Denver, Cheyenne or Omaha.”

There are two limitations on this idea: First, Chief Judge Paul White elucidates that

“. . . to appoint a roving panel would probably create substantial local reaction in smaller communities of the state. The experts would undoubtedly come from Lincoln or Omaha and would be subjected to the reaction that an expert is somebody who is simply more than 50 miles from home.”<sup>171</sup>

Secondly, a Western Nebraska District Judge feels that “. . . the cost of experts on the panel would be prohibitive to the average litigant.”<sup>172</sup>

(3) *The provision of funds to finance the procedure.* Essential to the success of any system is the method of financing it. A Lincoln District Judge explains:

“The problem in Nebraska would be securing the necessary funds to implement the program. There is always the expense involved in these instances which can be considerable. Litigants object to the present cost of litigation, and the propriety of using funds in private litigation presents difficulties in routine cases.”<sup>173</sup>

Several alternatives exist.

(a) *Public Funds*

This method was favored by 29 per cent of the District Court Judges, 19 per cent of the outstate attorneys, 30 per cent of the Lincoln-Omaha attorneys, 32 per cent of the doctors. An Omaha attorney raises the basic issue:

It is very difficult to answer this financial question until we know what purpose we are serving. If it is one of overall justice, the expense should be borne by the public, but there are obvious shortcomings to this solution. On the other hand, if this project were completely developed and public funds were used, it is very conceivable that the expense saved by the Court could easily compensate for the expenditure along the lines of the medical testimony."<sup>174</sup>

The New York experience illustrates the reality of the latter prediction.

(b) *Both Parties Equally Sharing  
the Costs*

Forty-three per cent of the District Judges, 53 per cent of the outstate attorneys, 46 per cent of the Omaha-Lincoln bar, and 53 per cent of the doctors favored this mode of finance which is now being used in the Federal Plans. An Omaha attorney summarizes the majority opinion: "I personally doubt that public finance or foundation funds could finance such a project. Although primarily engaged in insurance company defense work, I see no reason why the parties couldn't share the cost of the furnishing of an expert. An Omaha attorney dissents:

I can see no logical reason why the parties might be required to share the cost of such a system equally . . . this suggestion implies that the expert would be of equal value to both parties at all stages of the proceedings which cannot be the case . . ."<sup>175</sup>

(c) *Charge One Specific Party*

This method could involve charging the prevailing party or the unsuccessful party in the judge's discretion, charging as costs, or charging the party which originally requests the expert, as in the Baltimore Plan. It was favored by 29 per cent of the District Judges, 28 per cent of the outstate attorneys, 30 per cent of the Omaha-Lincoln attorneys, and 15 per cent of the doctors.

An Omaha attorney voices the objection:

"I can see no logical reason why the successful litigant should be required to do so . . . this refutes the theory that the expert is to be independent and objective. Moreover, with respect to the second suggestion, who is to determine when a litigant is 'successful' and when he is not?" An Omaha district judge offers a modification: "Both parties should equally share the cost if the case is settled. The successful litigant should pay in the event the trial reaches a conclusion or it should be included with other costs and assessed as provided by statute."<sup>176</sup> It should be noted that the method of having one side uniformly bear the costs is in effect in the Nebraska Workmen's Compensation cases as reflected by Judge Arms: "When it does become necessary for us to order an independent examination and report, we order the expense to be paid by the defendant."<sup>177</sup>

## CONCLUSION

One overriding conclusion can be drawn from this study. "In the broader context, the debate about the medical expert plan represents only the waves on the surface of the human sea."<sup>178</sup> The stronger, silent undercurrent is dissatisfaction on the part of the Bench, medical profession and majority of the Bar with current criteria of medical testimony. The strict application of the lawyer's adversary standard to medical evidence breeds discontent. The testimonial battle of experts has grown to be a pressing interprofessional problem with wide public repercussions.

Our adversary system, a system designed in antiquity so that lay persons could resolve the factual disputes of their peers, can be utilized to mislead. The court-appointed panel system offers a tool to help courts and parties resolve something which often eludes them in the heat of battle — medical truth. The question is one of balancing value judgments. Distinguished members of our Bar are at odds — some feel the battle of experts serves to educate the jury and bring us closer to the impartial verdict we all seek. Others believe that in many cases the addition of the court-appointed expert would further this education process and bring us still

closer to that degree of positiveness which in an imperfect world is the substitute for truth. Dedicated medical men are willing to act as such witnesses to clear up Hippocratic shadows and to bring the truth into sharper focus for the jury. The legal and medical professions must weigh heavily the values they seek to exchange.

In the meantime organized medicine and law should make a real effort to educate physicians concerning their responsibilities in courts. A closer relationship between the two professions and frank discussions cannot but help to alleviate the problem and lead us closer to the suggested discipline. When the professions set a standard that demands that a physician, testifying under oath in court, must state his opinion fairly and fully,

without bias and without regard to the side that calls him, neither suppressing nor over-emphasizing any aspect of the case, then and only then will we have **real expert medical testimony**.<sup>179</sup> Then and only then the big parade of paid partisans will no longer come to the courtroom to do battle for a price.

. . . the time has surely come for the professional expert to be taken out of the ranks of the ordinary witness with an inevitable bias in favour of the party who called him. He should be put upon a different plane, where his prime allegiance is to the court and his undoubted duty in law to submit his findings of fact and conclusion fairly, fully and frankly for all to see.<sup>180</sup>

(References and footnotes, 180 of them, not published herewith. They may be had by communication with the author. This article is reprinted from Nebraska Law Review, Vol. 44, May, 1965, by permission of the author and the publication).

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The bestial, outrageous murder of American nationalists, including a medical missionary, in the Congo brings into clear focus the glaring inconsistency between the administration's self-proclaimed humanitarian compassion and its foreign policy. The former, it seems, is domestic vote bait, while the latter is disgraceful abandonment of national interests. Simultaneously, there is demonstrated a new facet of courage and dedication in American physicians who are willing to risk — and even give — their lives on foreign soil, knowing that there the flag flutters weakly and that the Marines aren't coming. (From J Mississippi SMA, Jan. 1965).



# TREATMENT of *Abortion-Prone Patients*

**T**HIS report is a continuation of a previous study<sup>16</sup> in which progesterone-like hormones plus careful prenatal care were found to be of great benefit in prolonging pregnancies in women who previously aborted. As controls we have 5499 obstetrical patients, of whom we are using the ones who previously aborted; these controls did not receive any special care to avoid a repeat abortion in this present pregnancy.

Each pregnancy poses a complex problem. Without saying, the first responsibility is to bring the mother through the pregnancy without any damage, returning her to the nonpregnant state in excellent physical and mental health. Regarding the infant we usually take a living normal healthy child for granted. We also are accustomed to excusing an abortion and a premature labor as unavoidable incident. However we have a great obligation toward the infant. Any pregnancy which terminates<sup>2, 7, 10, 15</sup> too early for the infant to survive is a failure which reflects on the interest and knowledge of the obstetrician, whether the pregnancy ends as an early abortion or as a premature labor.

We used three progesterone-like hormones<sup>16</sup> in our first report. The hormones used were norlutin, delalutin, and enovid. Provera was the hormone added for the second study and the enovid study was continued in this second group.

The base line for a standard of what takes place in untreated controls is taken from a group of 5499 obstetrical patients who had routine care without any special care to avoid pregnancy loss. In the control group 573 aborted, and 106 had a pregnancy loss, either due to prematurity or stillbirth. An analysis of the 679 pregnancy losses is given in table 1 showing how the pregnancy hazard is increased with each abortion which is permitted. Several articles<sup>8, 9</sup> have been written showing the fate of obstetrical patients who have previously aborted and also the sharp upward curve in the abortion rate as the number of previous abortions in-

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creases. Nearly thirty years ago Malpas<sup>12</sup> analysis of repeated abortions indicated the increasing possibility of aborting the succeeding pregnancy if the previous one has been aborted. Nearly twenty years ago Eastman<sup>3</sup> made a study revealing findings similar to those reported by Malpas. In table 1, column 3 the percentage of our control obstetrical patients who aborted was 7.5 per cent of those who had no previous abortions, 19 per cent aborted the succeeding pregnancy of those who had one previous abortion, 62 per cent aborted who had two previous abortions, 92 per cent aborted who had three previous abortions and of those who had four or more previous abortions the entire 100 per cent aborted.

Obstetrical patients who have aborted are not only more likely to abort as seen in table 1, column 3, but there is also an increased tendency to deliver prematurely causing a further pregnancy loss. Table 1, column 4 gives the percentage pregnancy loss after viability. With no previous abortion there is a 1.8 per cent pregnancy loss after viability; with one previous abortion the pregnancy loss after viability is increased to 2.7 per cent; with two previous abortions the pregnancy loss takes a sharp rise to 6.2 per cent. Colvin<sup>2</sup> and Hodgkinson<sup>6</sup> in separate studies stress this same fact that patients who have aborted also have a tendency to deliver prematurely.

Accepting the fact that women who have previous abortions are a great obstetrical liability, then it becomes necessary to use all available means to help any new pregnancy develop to the stage of maturity at which the infant will be able to survive. The trend<sup>4, 5, 13-15</sup> is gradually swinging away from concentrating only on the patient who had three previous abortions as a special

Table 1  
5,499 CONTROL PATIENTS, FETAL SALVAGE  
RELATED TO PREVIOUS FETAL LOSS

| Previous Abortions | No. of Controls | Number Aborted | Stillbirths, Premature and Term Deaths | Total Fetal Loss | Fetal Salvage |
|--------------------|-----------------|----------------|----------------------------------------|------------------|---------------|
| None -----         | 4908            | 368- 7.5%      | 89-1.8%                                | 457- 9.3%        | 4451-90.7%    |
| One -----          | 435             | 82-19%         | 12-2.7%                                | 94-21.6%         | 341-78.4%     |
| Two -----          | 80              | 50-62%         | 5-6.2%                                 | 55-68.8%         | 25-31.2%      |
| Three -----        | 36              | 33-92%         | 0-0%                                   | 33-92%           | 3-8%          |
| Four or more ----- | 40              | 40-100%        | 0-0%                                   | 40-100%          | 0-0%          |
|                    | 5499            | 573-10.4%      | 106-1.9%                               | 679-12.4%        | 4820-87.6%    |

problem. Every abortion-prone patient is to be made a very special case. The pregnancy must be detected early and it must be treated early. A pregnancy test is done 40 to 43 days after the last menstrual period (L.M.P.). If the pregnancy test is positive, there is reasonable assurance of having a good pregnancy and that it is worthwhile to start hormone therapy. Thyroid medication is given to those patients whose metabolism indicates the need for it. Abortion prone patients are always evaluated on the basis of a possible incompetent cervix especially if they have lost a pregnancy after 3½ months. An incompetent cervix needs always to be repaired. Any indications of danger such as spotting or contractions are treated by bed rest and sedation. If these signs do not subside by rest and sedation at home, the patient is hospitalized.

When abortion or premature labor is in progress there are three basic abnormalities<sup>17</sup> of physiology which are not present in a normal pregnancy. One basic abnormality is uterine contraction of an intensity to cause dilation of the cervix and disturbance of placental attachment. The second abnormality is placental separation as demonstrated by bleeding. The third abnormality is premature rupture of the membranes. Bed rest and sedation are valuable in helping

avoid premature contractions, placental separation, or premature loss of water, but these are not adequate. It is accepted by all that in a normal pregnancy the mother secretes hormones which prevent premature labor contractions, and which help keep the placenta attached. These hormones are at first secreted by the corpus luteum and later are supplied largely by the placenta. If not sufficient hormones are available, it is necessary to substitute hormone therapy to bring the level up to that required to maintain the pregnancy. Substitute hormone therapy attempts to restore this patient who has insufficient hormones to the level of a normal obstetrical patient. The daily starting dose of the progesterone-like hormone was usually 10 mg, or if there was any cramping, backache, or spotting we usually used 20 mg. If any new signs or symptoms of threatened abortion appeared, we would increase this dosage up to 40 mg daily. This dosage was necessary only in a few people. Table 2 gives the average daily dosage.

Table 2 summarizes the results of the patients treated with the four progesterone-like hormones. The average number of previous abortions per patient is 1.8 in the delalutin group and 2.6 in the second enovid group and averages over 2 abortions per pa-

Table 2  
HORMONE TREATED PATIENTS

|                  | Total Patients | Previous Abortion Per Patient | Daily mg. Dosage | Live Healthy Babies | Per-cent L&W | Term L&W | 28 to 37 wk L&W | Stillbirths | 26 to 37 wk Expired | 22 to 26 wk Expired | Abortion 8 to 22 Weeks |
|------------------|----------------|-------------------------------|------------------|---------------------|--------------|----------|-----------------|-------------|---------------------|---------------------|------------------------|
| Norlutin -----   | 40             | 2.1                           | 26               | 20                  | 50           | 12       | 8               | 1           | 5                   | 6                   | 8                      |
| Delalutin -----  | 66             | 1.8                           | 20               | 42                  | 63.6         | 33       | 9               | 0           | 7                   | 3                   | 14                     |
| Enovid No. 1---- | 61             | 2.1                           | 20               | 48                  | 78.7         | 39       | 9               | 1           | 3                   | 0                   | 9                      |
| Provera -----    | 18             | 2.0                           | 21               | 14                  | 77.7         | 8        | 12              | 0           | 1                   | 0                   | 3                      |
| Enovid No. 2 --  | 46             | 2.6                           | 17               | 38                  | 82.6         | 26       | 6               | 0           | 2                   | 1                   | 5                      |

tient. In our control group there would be a salvage rate of only 31.2 per cent on those who aborted twice. The number of living normal babies is a great improvement in our treated patients. In the norlutin group we had 50 per cent fetal salvage; in the second enovid group we had 82.6 per cent fetal salvage. Hodgkinson<sup>6</sup> *et al* had similar results in their habitual abortion patients.

Some fear the possibility of infants with malformations if an all out effort is made to retain a pregnancy threatening to abort. We had no infant with malformations in our entire series of treated patients. Other investigators, including Burge and Thompson<sup>18</sup> found that patients threatening to abort did not tend to fetal malformations if the pregnancy responded to treatment. In our series, two female infants whose mothers had received norlutin had some enlargement of the clitoris; this was not a serious enlargement, but rather a borderline enlargement which may or may not need definitive treatment depending on later development. Some of the mothers developed some masculinizing characteristics from norlutin in the dosage necessary to carry the pregnancy. We saw no masculinization as a result of any of the other three hormones.

Missed abortion is not infrequent when hormone therapy is prescribed early in the pregnancy. Pregnancies which are not progressing well are retained because hormone therapy prevents them from aborting. Missed abortion is nature's way of rejecting abnormal pregnancies; in this entire series when the fetus was not normal it succumbed and ended as a missed abortion. In our study we had a total of 39 abortions. Thirteen of these abortions were missed abortions.

We have quite a large number of patients treated by two of the hormones; 66 were treated with delalutin, 107 were treated with enovid. We have further broken down these patients into two groups, the first being those who had abortions but have no living children and those who had abortions but have one or more living children. Psychologically there is quite an advantage to those who have living children

because some of the mental stress is gone. Of the 66 delalutin treated patients, 42 delivered living healthy babies which survived, being 63.6 per cent salvage. There were 27 mothers of the 42 living babies who had previous living children and in this pregnancy they had 65.2 per cent salvage, while the 15 mothers who were childless had 61.5 per cent salvage. The 107 enovid treated patients had 86 living healthy babies with a salvage of 80.4 per cent. The 86 mothers who had living healthy babies are found to be divided into 27 who are childless with an unusually high salvage rate of 81.8 per cent and 59 who have one or more living children who had a salvage rate of 79.7 per cent. All of our patients were treated essentially alike except that the provera and enovid No. 2 patients have the advantage of two years' more experience.

Kistner<sup>11</sup> gives an excellent summary of the qualifications of various progesterone-like hormones and in which area each of these hormones is most valuable. In his opinion provera and delalutin are the hormones of choice in treating threatened abortion, while enovid was found to be less effective. Kistner believes that norlutin being very effective in other areas of hormone therapy should not be used in treating threatened abortion. Table 2 shows provera and delalutin to be very effective in improving fetal salvage, yet in our series enovid was found to bring the best results. Before the use of progesterone-like hormones, the natural progesterone hormone brought the therapy of threatened abortion a great step forward. Kistner confirms the effectiveness of progesterone for use in threatened abortion.

### Summary

1. Abortion-prone patients are treated with progesterone-like hormones in order to enable a larger number to deliver healthy children.
2. Four groups of patients are treated each with a different hormone. The results of each are tabulated.
3. In addition to hormones, every other available method such as rest, sedation, and reassurance are used.



4. A control group provides information on what hope a patient has of delivering a healthy child if she has had an abortion; also what further hazard is added when she has had two, or three, or even more previous abortions.
5. The results in the treated groups are a great improvement over the control group.
6. Complications and side effects due to the hormones are at a minimum.
7. Malformations or defects are not increased because of saving pregnancies which are threatening to abort.

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"The real purpose, then, of trying to open doors for children is not to divert them or amuse ourselves; it is to build eager, outgoing attitudes toward the demanding and complicated business of living. This, surely, is the most valuable legacy we can pass on to the next generation: not money, not houses, or heirlooms, but a capacity for wonder and gratitude, a sense of aliveness and joy . . ." (Gordon: *The Night the Stars Fell*, Reader's Digest, October, 1964, p. 96).

# NEUROLOGIC MANIFESTATIONS of *Fat Embolism*

**F**AT embolism demonstrates another means whereby the central nervous system may be injured indirectly and from a distant lesion. Following fractures, particularly of large, long bones, globules of fat often appear in the bloodstream, to be caught in capillaries especially of lungs, occasionally of kidneys and central nervous system. Underlying mechanisms have long been considered mechanical: the breaking up of fatty tissue; open marrow vascular channels; even compression to force fatty substance into the bloodstream. This has appeared to be an oversimplification. In recent decades data suggests that the mechanisms may be predominantly chemical, as:

Certain injuries may alter emulsion stability of blood lipids. Plasma emulsifiers may become deficient or inactivated. Blood lipids then "precipitate" from within the bloodstream.<sup>1</sup>

Injury may locally alter fat to make it readily absorbable.

Fat embolism has followed:<sup>1-4</sup>

Bone fracture (especially large, long bone)

Orthopedic surgery<sup>5</sup>

Severe soft tissue trauma

Violent jarring

Operation on viscera<sup>5a</sup>

Severe burns

Prolonged anesthesia

Fatty hepatic disease<sup>6</sup>

Sicklelema

Parturition (rare)<sup>6a</sup>

Exogenous injection (abortifacient, parenteral oily preparation)<sup>6b</sup>

The incidence and severity of fat embolism appears grossly in direct proportion to extent and severity of trauma. However, notable exceptions are known. Pulmonary capillaries provide a first line of defense and tolerate some embolism without symptoms. However, when the lungs are overwhelmed, two developments appear: (1) neutral fats are hydrolyzed to fatty acids, which are irritating to vascular endothelium; (2) globules then strain into systemic circulation.<sup>7a</sup>

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(Paradoxical embolism is a rare possibility). Cerebral fat embolism follows pulmonary embolism. In the classical clinical example this is readily evident with first, a pulmonary phase of symptoms, then the cerebral phase. In some instances, however, the pulmonary symptoms may appear minimal and the examiner is impressed by the sudden appearance of the cerebral symptoms.<sup>6c</sup>

At least a small amount of pulmonary fat embolism is not an unusual postmortem finding, particularly of patients dying of trauma. It has been reported in 40-60 per cent of battle casualties.<sup>1</sup> It is said to be uncommon in children under age 14.<sup>7</sup> Depending on the quantity of fat globules in the blood, then, one notes asymptomatic, mild pulmonary, severe pulmonary, thence to cerebral and even fulminating forms.<sup>1-4</sup> The *complete* clinical picture includes:

Trauma, commonly fracture

Free interval of 24-48 hours, usually (30 min. to 9 days reported).

Pulmonary edema with dyspnea, tachypnea, cough, cyanosis (mild), frothy sputum; broncho-pneumonia.

Tachycardia

Temperature 101-103° F

Irritability, disorientation, delirium

Stupor, coma (often rapid onset, evolution)

Decerebrate rigidity (an early feature if it appears)

Usually absent or minimal, focal or lateralizing signs

Neurologic features may wax and wane.

Convulsion (not common)

(Spinal fluid discloses no abnormality)

Petechial hemorrhages; upper chest, axillae, base of neck, shoulders, conjunctiva, oral mucus membranes. Biopsy is diagnostic.

Retina: fat globules in arteries; small hemorrhages; pale, sharply demarcated areas of edema.

EEG: normal or diffuse, slow wave-abnormalities. Serial study may be useful.

Elevated blood lipase in some. Hypocalcemia. Tests for excess fat in urine, sputum (significant if positive)

Renal biopsy (fatty embolism)

Chest X ray: "snowstorm pattern" in some. Diffuse, bilateral, pulmonary densities resembling pulmonary edema; nodular, perihilar and basal in location.<sup>6c</sup>

Mortality 30-50%. Survivors usually have no cerebral sequelae.

Much of the above picture may be masked by anesthesia. Fulminating forms often appear much like "irreversible shock." Recent studies suggest that anemia, hypocalcemia and arterial oxygen-desaturation commonly accompany fat embolism.<sup>4</sup> Interestingly, fatal fat embolism appears only with cerebral involvement.<sup>4a</sup>

Treatment includes consideration of one or more of the following:<sup>3</sup>

Oxygen (?hyperbaric)

95 per cent O<sub>2</sub> - 5 per cent CO<sub>2</sub> for cerebral vasodilation

Heparin

Dextran (low molecular weight)

Tourniquet on source

Intravenous (I.V.) fluids

I.V. 5 per cent alcohol

I.V. calcium gluconate

Adrenocorticotrophic hormone (ACTH)

I.V. decholin

Hypothermia?

Neuropathologic study commonly discloses:<sup>8</sup>

In patients dying within 4 days: petechial hemorrhages; "cerebral purpura;" pericapillary hemorrhages; fat globules in capillaries; minute infarctions. Most of findings in white matter.

In patients surviving longer, miliary foci of necrosis in deep layers of cortex and white matter.

(References available from the author).

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#### SPEAKING OF SIR WINSTON CHURCHILL

"The life we are honoring today is unique. The oldest among us can recall nothing to compare with him, and the younger ones among you, however long you live, will never see the like again." (From "Man of the Century: A Churchill Cavalcade." Reader's Digest, Jan. 1965, p. 247).



## Coming Meetings

### CRIPPLED CHILDREN'S CLINICS—

- August 7 — Broken Bow, Elks Club
- August 14 — O'Neill, High School Building
- August 28 — Scottsbluff, St. Mary's Hospital
- September 11 — Cozad, Elks Club
- September 25 — Sidney Elks Club.

**MEDICAL ASPECT OF SPORTS** — The fourth annual Postgraduate Conference on the Medical Aspect of Sports will be held on August 19 and 20, 1965, at the University of Rhode Island Keaney Gymnasium.

**THIRD ANNUAL SEMINAR ON THE MEDICAL ASPECTS OF COMPETITIVE ATHLETICS** — August 20 and 21, 1965, Hotel Cornhusker, Lincoln, Nebraska. This Seminar was prepared by the Sub-Committee on Athletic Injuries of the Health Education in Schools and Colleges Committee.

**FLYING PHYSICIANS' ASSOCIATION—** The Flying Physicians' Association will hold its eleventh annual meeting at the Deauville Hotel in Miami Beach, from August 22 to 27, inclusive. Dwaine J. Peetz, MD, of Neligh, is chairman of the Nebraska Chapter. The national society now has more than 1700 members.

**THE ANNUAL MEETING OF THE AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION** — Will be held on August 22-27, 1965, at the Sheraton Hotel, in Philadelphia.

**AMERICAN ASSOCIATION OF BLOOD BANKS** — 18th annual meeting; Americana Hotel, Bal Harbour, Florida, September 14-17. Info: The Association at 30 North Michigan Ave., Chicago 2.

**OCCUPATIONAL HEALTH CONGRESS—** The 1965 Congress on Occupational Health, sponsored annually by the AMA Council on Occupational Health, will

be held concurrently with the Indiana State Medical Association's annual convention. The meeting will take place at the Murat Temple in Indianapolis, October 12-14. Additional information may be obtained from: Department of Occupational Health, AMA, 535 North Dearborn Street, Chicago, Illinois 60610; or from the Indiana State Medical Association, 3935 North Meridian Street, Indianapolis, Indiana 46208.

**ANNUAL MEETING OF ARTERIOSCLEROSIS COUNCIL** — The Council on Arteriosclerosis of the American Heart Association will hold its annual meeting at the Hotel Deauville, Bal Harbour, Florida, on October 13 and 14. Write to the American Heart Association, 44 East 23rd Street, New York, NY 10010.

**AAMA PLANS EDUCATIONAL SEMINAR** — The American Association of Medical Assistants will hold its annual meeting in New York, October 13-17. A two-day educational seminar is offered on October 15 and 16, at the Roosevelt Hotel. The address of the AAMA is 510 North Dearborn Street, Chicago 10, Illinois.

**AMERICAN HEART ASSOCIATION** — The (38th) annual Scientific Sessions of the American Heart Association will be held October 15-17, 1965 at the Hotel Americana, Bal Harbour, Florida. There will be six programs on clinical cardiology and simultaneous sessions on specialized cardiovascular subjects. Write to local Heart Associations or to the AHA national office, 44 East 23rd Street, New York, NY, 10010.

**AMERICAN ACADEMY OF PEDIATRICS** — Palmer House, Chicago, 34th annual meeting, October 23-28. Write to the American Academy of Pediatrics, 1801 Hinman Avenue, Evanston, Illinois 60204.

**DISASTER MEDICAL CARE** — The 16th National Conference on Disaster Medical Care will be held at the Drake Hotel in Chicago, October 30 - 31. Information:

Council of National Security, AMA, 535 North Dearborn Street, Chicago, Illinois 60610.

1965 POSTGRADUATE COURSES SPONSORED BY THE AMERICAN COLLEGE OF CHEST PHYSICIANS — Clinical application of cardiopulmonary physiology: Knickerbocker Hotel, Chicago, October 18-22. Diagnosis and treatment of diseases of the heart and lungs: Barbizon Plaza Hotel, New York City, November 15-19. What's new in the diagnosis and treatment of cardiovascular and pulmonary diseases: Fountainebleau Hotel, Miami Beach, January 24-28, 1966. Clinical application of cardiopulmonary physiology: Ambassador Hotel, Los Angeles, February 14-18, 1966. Cine-angiographic techniques in cardiovascular diseases: Cleveland Clinic, Cleveland, April 11-13. Write to: American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

THE OMAHA MID-WEST CLINICAL SOCIETY'S 33rd ANNUAL FOUR-DAY POSTGRADUATE ASSEMBLY — Will convene in the Civic Auditorium, October 25, 26, 27 and 28. This program is acceptable for 32 accredited hours by the American Academy of General Practice.

ANNUAL OTOLARYNGOLOGIC ASSEMBLY of 1965 — Will be held October 30 through November 5, in the new Illinois Eye and Ear Infirmary at the Medical Center, Chicago. The Department of Otolaryngology of the University of Illinois College of Medicine offers a condensed postgraduate basic and clinical program for practicing otolaryngologists under the direction of Doctor Emanuel M. Skolnik. It is designed to bring to the specialists current information in medical and surgical otorhinolaryngology. Info: Department of Otolaryngology, College of Medicine of the University of Illinois at the Medical Center, Chicago Box 6998, Chicago, Illinois 60680.

FIRST NATIONAL CONFERENCE ON AREAWIDE HEALTH FACILITIES PLANNING, AMA — Americana Hotel,

Bal Harbour, Florida, November 28-29, 1965.

Future Meetings of the American College of Surgeons—

ANNUAL CLINICAL CONGRESS, October 18-22, 1965, Atlantic City, New Jersey.

— 1966 —

BAL HARBOUR, FLORIDA, January 13-15. Sectional Meeting. Americana Hotel.

HOUSTON, TEXAS, January 31 - February 2. Sectional Meeting. Sheraton-Lincoln Hotel.

CLEVELAND, OHIO, March 14-17. Annual 4-Day Sectional Meeting for Doctors and Graduate Nurses. Sheraton-Cleveland and nearby hotels.

ANNUAL CLINICAL CONGRESS, October 10-14, 1966. San Francisco, California.

For any advance information address: Secretary, American College of Surgeons, 55 East Erie Street, Chicago, Illinois 60611.

ANIMAL CARE PANEL — 16th Annual Meeting; Sheraton Hotel, Philadelphia; November 15-19, 1965. Contact Mr. Joseph J. Garvey, Executive Secretary, 4 East Clinton Street, Joliet, Illinois 60434.

THE HAHNEMAN MEDICAL COLLEGE AND HOSPITAL of Philadelphia offers the following Postgraduate Education Courses during 1965 and 1966:

—November 22-24, 1965; 15th Hahneman Symposium Cancer Chemotherapy; Dr. Isadore Brodsky; Sheraton Hotel.

—December 8-10, 1965: A Hahneman Symposium on New Concepts in Gynecological Oncology; Dr. George C. Lewis; Sheraton Hotel.

—April 20-23, 1966: 16th Hahneman Symposium, Arterial Occlusive Disease; Dr. Albert N. Brest; Marriott Motor Hotel.

—December, 1966: 17th Hahneman Symposium, Nutritional Dysfunction; Dr. Donald Berkowitz; Sheraton Hotel, Philadelphia.

SECOND NATIONAL SYMPOSIUM ON COCCIDIOIDOMYCOSIS — December 8-9-10, 1965, Del E. Webb Towne House, Phoenix, Arizona. For further information, contact: Arizona Tuberculosis and Health Association, Inc., 733 West McDowell Road, Phoenix, Arizona 85007.

CONTINUING EDUCATION — Closed Chest Resuscitation; University of Nebraska College of Medicine, at Eppley Research Institute, March 8, 1966 (for physicians, 9th for dentists, and 10th for nurses). Info: Continuing Education, University of Nebraska College of Medicine, 42nd and Dewey, Omaha 5.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS — "Vision for the Space Age;" Houston, Texas, Rice Hotel, March 24-26, 1966. Info: Director of Information John D. Coleman, 16 East 40th Street, New York 10016.

FIRST ANNUAL BIOMEDICAL LASER CONFERENCE — June 17-18, Sheraton-Boston Hotel, Boston, Massachusetts.

TENTH WORLD CONGRESS OF THE INTERNATIONAL SOCIETY FOR REHABILITATION OF THE DISABLED — September 11-17, 1966, Rhein-Main-Hall, Wiesbaden, Germany.



## Know Your Blue Shield Plan

Blue Shield — "Just Another Insurance Company?"—

Every now and then, we hear Blue Shield referred to as "just another insurance company."

Blue Shield differs radically from every other prepayment or insurance plan—in its basic purposes, its sponsorship and its organization.

Blue Shield was established not as a business enterprise, but as a mechanism to help

patients receive and pay for doctors' services. Since patients need doctors and doctors need patients, there has been no need for anyone to invest risk capital in producing medical care or in persuading people to buy it. Hence, Blue Shield pays no profit to private investors, but devotes every possible penny of the subscriber's dollar to the payment of needed medical care services.

Blue Shield's policies and procedures are determined by its Board of Directors and by representatives of the sponsoring medical societies. Indeed, Blue Shield is the one and only medical care prepayment program in which physicians have a directing voice.

But the privilege of guiding Blue Shield carries with it a responsibility to make Blue Shield work — to the satisfaction of the nearly 50 million people who look to Blue Shield — for medical care cost protection.

Blue Shield represents the only strong shield against the attacks of those who would reduce the profession to the servitude of the state.

Blue Shield is the only form of prepayment dedicated to the principle of assisting the public to receive adequate doctors' services on a fair fee for services, voluntary, low overhead, free choice basis; with equality, consideration, and justice for all participants, doctors and public alike.

## Medicare in Operation

Signatures of Physicians and Dentists—

1. The signature on the DA Form 1863-2 (Services by Civilian Physicians and Dentists) must be by the person named in Item Number 14 on the claim. The claim cannot be signed by anyone other than the physician or dentist furnishing the care.
2. If the signature is different from Item Number 14, the physician signing the claim should attach sufficient clarification of this to the claim.
3. If any part of the certification of Item Number 29 is crossed out, the claim cannot be paid.



4. Date of signature must be shown and cannot be earlier than the "To" date in Item Number 21. If this occurs, claim cannot be processed for payment prior to the time shown as the "To" date. (When correspondence with physicians on other matters is required, the physician should not submit his claim until the case is completed, or the "To" date on his claim).

The only exception to the Medicare rule on signatures of the physician or dentist is as follows:

Only in the case of a deceased physician or dentist is a variance allowed between Item Number 14 and 29 on the DA Form 1863-2. In cases such as this, the claim is forwarded to the Office for Dependents' Medical Care for counter-signature before payment is sent to the representative of the deceased physician or dentist.

## Announcements

### Cornhusker Conference on Surgery—

The Department of Surgery of the University of Nebraska has planned something new: a "Cornhusker Conference on Surgery."

Place: Nebraska Center for Continuing Education, Lincoln, Nebraska.

Time: November 6, 1965, 9 a.m. to 11:30 a.m. This is the day of the Nebraska-Kansas football game, in Lincoln. There is no conflict; it will be quite easy to attend the conference and then cheer our boys on to victory at the stadium.

The guest faculty will be made up of members of the Department of Surgery of the University of Kansas.

Information: write to the Department of Surgery, University of Nebraska College of Medicine, Omaha, Nebraska.

The Conference is open to all surgeons, regardless of address. Admission is limited only by number, and reservations must therefore be made.

### Institute for Biomedical Research—

Raymond M. McKeown, MD, president of the AMA-ERF, has announced the appointments of five scientists to the staff of the new Institute for Biomedical Research. They are: George R. Collins, former supervisor of the Animal House Department at the Rockefeller Institute; Clyde R. Goodheart, MD, associate professor of pediatrics at the University of Southern California School of Medicine and virologist at Children's Hospital of Los Angeles; Roy E. Ritts, Jr., MD, director of the Institute; Howard A. Schneider, PhD, currently director of the laboratory of experimental ecology at the Rockefeller Institute; and Dan W. Urry, PhD, post-doctoral fellow in chemistry at Harvard University.

### Tenth Congress of the Pan-Pacific Surgical Association—

The Tenth Congress of the Pan-Pacific Surgical Association will be held as follows. Part I: September 20-28, 1966, Honolulu, Hawaii; Part II: September 28-October 10, 1966, in Japan and Hong Kong; Part III: September 28-November 1, 1966, in Japan, Hong Kong, The Philippines, Thailand, India, Singapore, Australia, and New Zealand. Specialties included are general surgery, ophthalmology, otolaryngology, thoracic cardiovascular surgery, neurosurgery, obstetrics and gynecology, orthopedics, plastic surgery, urology, anesthesiology, and radiology. For information, write to: Pan-Pacific Surgical Association, Room 236, Alexander Young Building, Honolulu, Hawaii 96813.

### Obstetrics and Gynecologic Seminar Cruise—

An obstetrics and gynecology seminar cruise to Nassau and Freeport in the Bahamas is being presented by the Department of Obstetrics and Gynecology, College of Medicine, University of Florida. It is approved by the Florida Medical Association and by the Florida Academy of General Practice. Guest lecturers will be Dr. Nicholas J. Eastman, Professor Emeritus, Department of Obstetrics, Johns Hopkins University School of Medicine, and Dr. S. Leon Israel, Professor, Department of Obstetrics

and Gynecology, University of Pennsylvania. The cruise is open to all physicians. Details concerning cruise reservations may be obtained from E. M. Baskette, Eastern Steamship Line, Post Office Box 882, Miami, Florida 32101. Dates are February 28-March 4, 1966.

#### Elected Officers—

John T. Dickenson, MD, Pittsburgh otolaryngologist, was elected president, and John Conley, MD, New York, otolaryngologist, was named president-elect, of the American Academy of Facial Plastic and Reconstructive Surgery, Inc., at the group's annual (June) meeting in New York. The society is new, has 700 physician-members, and was formed by the recent merger of the American Otorhinologic Society for Plastic Surgery, Inc., and the American Society of Facial Plastic Surgery, Inc.

#### Orthopaedic Surgeons to Meet—

The Committee on Injuries of the American Academy of Orthopaedic Surgeons will hold the Second Postgraduate Course on Fractures and Other Injuries at the Riviera Motel, Atlanta, Georgia on October 11, 12, 13, and 14, 1965. The program has been arranged by an Atlanta Committee under the Chairmanship of Dr. Wood Lovell. The distinguished out-of-town faculty will consist of 14 outstanding teachers and 20 surgeons from the Medical Schools of Georgia will take part.

This year's course will place special emphasis on hand injuries, tendon repair, peripheral nerve lesions, dislocations and fracture, dislocations of the shoulder and hip, fractures of the humerus, spine, lower third of femur, condyles of tibia, ankle, clavicle and scapula. Epiphyseal and forearm injuries in children will also be covered along with mold arthroplasty of the hip after injury, fat embolism, pathological fractures, the treatment of non-unions and the juvenile amputee. A special program will be directed to the diagnosis and treatment of acute problems of the hand.

A question and answer period will follow

each presentation and several movies will be shown.

The course is opened to all physicians. The registration fee is \$75.00. Each registrant will be a guest of the committee for one luncheon and a chairman's reception on Thursday evening, October 12, 1965. Residents, internes and medical students are admitted free by a letter from their chief of service. The 1964 class consisted of 350 registrants. The course is approved for 30 hours of Category II for general practice.

#### AMA to Sponsor Seventh National Conference On the Medical Aspects of Sports—

The Seventh National Conference on the Medical Aspects of Sports, sponsored by the American Medical Association under the auspices of the AMA Committee on the Medical Aspects of Sports, will be held in Philadelphia, Pennsylvania, at the Benjamin Franklin Hotel on November 28, 1965. The Conference is held annually in conjunction with and on the first day of the Clinical Convention of the American Medical Association. In addition, the Conference will be held in cooperation with the observance of the bicentennial anniversary of the University of Pennsylvania's School of Medicine and of medical education in the United States.

As was true of the previous six conferences, the seventh will cover a wide range of subjects of interest to physicians, especially those serving school and college sports programs. Included will be papers, panels, and discussions relating to readiness for sports participation, management of health problems in sports, and application of research to injury prevention.

Those interested in receiving further information concerning the Conference should address the Secretary, Committee on the Medical Aspects of Sports, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

#### Dr. Morgan Elected—

Dr. Harold Morgan was made Vice-Chairman of the Section of Obstetrics and Gynecology of the AMA at the recent annual meeting.



## Doctors in the News

Dr. W. Andrew Bunten, of Cheyenne, Wyoming, born in Pawnee City, Nebraska, in 1896, a 1922 graduate of the University of Nebraska College of Medicine and a fellow in neurologic surgery in the Mayo Graduate School of Medicine, University of Minnesota at Rochester, from 1927 to 1929, was elected vice-president of the American Medical Association by acclamation at the 114th annual session of the organization at New York City, June 20 to 24, 1965.

## News and Views

Nebraska Chapter of American Medical Writers Association Has Workshop—

The Nebraska Chapter of the American Medical Writers' Association sponsored its first workshop on medical communication, on April 29, 1965, at the Sheraton-Fontanelle Hotel, in Omaha.

Featured speakers were Mrs. Pringle

Smith, medical writer and consultant at Nebraska Psychiatric Institute, and Mrs. Reba Benchoter, Chief of the Communications Division at the Nebraska Psychiatric Institute.

A notebook on rules and examples of medical writing was distributed to each participant by Mrs. Smith. Examples of poor writing practice were discussed and edited. Four important guides in editing were presented: avoid extra words; use familiar words instead of unfamiliar ones whenever possible; be concrete, avoiding vague generalities, and stale cliches; and try to keep related words together.

Mrs. Benchoter distributed a folder on the use of audio-visual techniques in presenting material. She demonstrated the use of the overhead projector, slides, film strips and movies. Each participant made a piece of material that could be presented on the overhead projector. Mrs. Benchoter described some uses of the closed circuit television system which connects Norfolk State Hospital and the Nebraska Psychiatric Institute.



Dr. Frank Cole Speaks at Medical Writers Meeting



During the business meeting, Dr. Raymond Pogge, Medical Director, Dorsey Laboratories, was elected delegate to the National Board of Directors. Reports were presented by the secretary and treasurer. Later in the program, Dr. Frank Cole, new Editor of the Nebraska State Medical Journal, discussed the function of the Journal. In addition, he discussed editorial and proof-readers' marks on manuscripts.

Nineteen people were present at this meeting. The next meeting will be in the fall of 1965.

#### Physicians for Automotive Safety—

Thirty physicians, members of the newly organized "Physicians for Automotive Safety," made a "dignified protest" on April 7, at the New York Coliseum, before the 1965 International Automobile Show. Placards carried by the physicians indicated 14 objections to current automobile design. Membership inquiries and requests for other information should be directed to Arnold Constad, MD, Secretary-Treasurer, 527 Morris Avenue, Springfield, New Jersey.

#### The Long Patent Amendment—

Senator Russell Long (D., La.) would like the government to take patent rights developed on a drug project using federal research or contract money; in general, the government would take all patents, regardless of the amount of its contribution. The Long patent amendment was defeated in senate vote, 55 to 36.

#### "New Drugs"—

We have just received a copy of "New Drugs," a publication by, and evaluated by, the AMA Council on Drugs. This first (1965) edition is an outgrowth of the Council's previous annual volume, "New and Nonofficial Drugs." The agents discussed in detail are those generally available in the U.S. that have been introduced within the past ten years. It is not a list of approved or accepted drugs.

We like the title; it is much better than the old "N.N.R.;" and we like the book.

#### Tuberculosis Is Still Serious—

Although the number of deaths in this country due to tuberculosis has decreased dramatically during the past half century, 50,000 new cases are reported in the U.S. each year, and 9,000 deaths caused by this disease occur here annually. The nonwhite tuberculosis death rate is approximately three times higher than the white rate, while the male deaths are three times as great as deaths of females.

#### Radioisotopes in Clinical Use—

A partial list of radioisotopes in clinical use, according to the AMA, includes iodine-131, used in thyroid function study and in the diagnosis of thyroid cancer; iron-59, used in iron metabolism studies; chromium-51, used in survival studies of red blood cells; cobalt-60, used as label on Vitamin B<sub>12</sub> to diagnose pernicious anemia; iodine-131 and gold-198, used as labels on rose bengal to test liver function and also to seek tumors of the liver; selenium-75, employed in studies of the pancreas; gallium-68, used in brain scans for tumors; technetium-99, used in thyroid scans and in placenta scans in pregnant women; iodine-131, used as label on fat for intestinal absorption studies; and strontium-85 and calcium-47, employed in bone studies and in the diagnosis of bone cancer. In addition, there are cobalt-60 and cesium-137, used in "bombs" to provide gamma radiation externally, employed for tumors responding to external radiation; iodine-131, used in toxic goiter, in thyroid cancer, and in certain cases of angina pectoris and congestive heart failure; phosphorus-32, employed in some types of leukemia, polycythemia vera, metastatic bone cancer, and Hodgkin's disease; krypton-85 and xenon-133, used in measuring cerebral blood flow; magnesium-28, used in studying intestinal absorption of magnesium; mercury-197 and mercury-203, used as label on drug to locate brain tumors; colloidal gold-198, used to dry fluids in thoracic and abdominal cavities. There are also colloidal P-32, employed in granulocytic leukemia and diffuse lymphoma of the liver; yttrium-90, used in some cases of prostatic cancer; strontium-90 and again yttrium-90, used in ra-

diation surgery to destroy the pituitary gland in cases of advanced cancer; and cobalt-60, cesium-137, radium-226, radon-222, and strontium-90, used for certain localized tumors, as in cancer of the cervix and of the head and neck. The list is impressive, and we feel a little better about what we did to the atom.

## Human Interest Tales

Doctor D. J. Loschen, formerly of Wakefield, has established an office in York.

Doctor Robert Osborne, Norfolk, spoke on "Adolescence" at a meeting of the Norfolk Organized Psychiatric Aides.

Doctor Carl L. Frank, Scottsbluff, has been elected president of the West Nebraska General Hospital Medical Staff.

Doctor Gordon E. Gibbs, Omaha, was recently elected secretary of the National Cystic Fibrosis Club at its annual meeting in Philadelphia.

Doctor G. W. Graupner, Grand Island, has been installed President of the Nebraska Chapter of the American College of Surgeons for the 1965-66 year.

Doctor J. J. Keegan, Omaha, received a distinguished service to medicine citation from the University of Nebraska College of Medicine at commencement exercises in June.

Doctors Margaret Faithe and Rose Faithe, Wakonda, South Dakota, have leased the office of the late Doctor D. L. Fletcher in Orchard and are in the process of establishing practice.

William S. Carter, MD, became associated with Drs. Judd, Klabenes and Alliband on July 1, 1965. Dr. Carter has been at the University of Kansas Medical Center for the past 4 years, where he completed a residency in otorhinolaryngology.

## Deaths

SULLIVAN — Harry T. Sullivan, MD, Omaha, died June 16, 1965, at the age of 73. A life-long resident of Omaha, he began his practice in 1918, after graduation

from Creighton University Medical School. He was a member of the board of St. Catherine's and St. Joseph's Hospitals and was a member of the staff at Archbishop Bergan Mercy Hospital.

## Correspondence

To the Editor:

In your June issue appeared an article by Dr. Frank Cole regarding halothane hepatotoxicity. Had this been published in 1962 it would have passed unanswered. However, it has appeared during 1965, a year of enlightenment; and, because it is no more than a review of past events and could possibly influence those who would like to use or continue to use halothane, I believe the following rebuttal is indicated.

Some of Dr. Cole's references were incompletely quoted. Keeri-Zsanto stated: 1. Hepatic complications of anesthesia and surgery have always existed. 2. Patients with pre-existing hepatic disease showed fewer complications after halothane than with a variety of other agents. 3. There is doubt that halothane produces hepatic complications. Again, Jones' work was with gastric instillation of 10 per cent halothane in mice, hardly comparable to 1 per cent or 2 per cent intrapulmonary instillation in man!

On the positive side, there have been some well-done retrospective studies on man in rather large series (Allen<sup>1</sup> 36,000 cases and Gordon<sup>2</sup> 92,000 cases). Allen discovered that jaundice followed halothane in 0.54 cases per thousand and cyclopropane in 0.98 cases per thousand. Gordon found a similar proportion, jaundice followed halothane in 4.1 cases per thousand and cyclopropane in 7.4 cases per thousand. Another 100,000 cases were reviewed by Slater,<sup>3</sup> Wilson,<sup>4</sup> and Mushin<sup>5</sup> and they could not find a cause-and-effect relationship between halothane and postoperative jaundice or hepatic necrosis. Actually, it would appear from these studies that halothane is only about one-half as damaging to the liver as cyclopropane, but in Dr. Cole's words, "A few thousand cases will tell us little."



(He based his paper on sixty-six retrospective cases).

In most teaching anesthesiology departments throughout the world, halothane is considered a safe anesthetic agent which is not particularly injurious to the liver. Hepatic complications, as before, are attributed to primary disease, hepatitis, surgical manipulation, septicemia, hypotension, blood transfusion, and antibiotics. There are probably other etiologic factors of which we know little yet. We should certainly not forsake such valuable anesthetic agents as cyclopropane and halothane on the basis of presently available information.

Sincerely,

Warren W. Fieber, MD  
Assistant Professor of  
Surgery (Anesthesia)

1. Allen, H. L., and Metcalf, D.W.: *Anesth Analg* 43:159, 1964.
2. Gordon, R. A., and Henderson, J. C.: *Canad Anesth Soc J* 11:453, 1964.
3. Slater, E. M., et al: *New Engl J Med* 270:983, 1964.
4. Wilson, R. D., et al: *Anesth Analg* 43:40, 1964.
5. Mushin, W. W., et al: *Brit Med J* 5405:329, 1964.

#### REPLY BY DR. COLE

My article discussing the hepatotoxicity of halothane that appeared in the June, 1965 issue of the *Journal* was meant to make us think about it, and not to stop thinking. Dr. Fieber states that some references were incompletely quoted. The only way to quote a reference completely is to reproduce the entire article. They were quoted correctly and accurately. Dr. Fieber prefers a 1962 date. Of my 25 references, no less than fifteen appeared after 1962. Vandam's editorial, calling for a thorough study, was published after that year. Since 1963, there have been reports by Brody and Sweet, by Lindenbaum and Leifer, and by Bunker, an editorial in the *New England Journal of Medicine*, articles by Tornetta and Tamaki, by Heidenberg, by Chamberlain, by Cohen and Bellville, by Blackburn, Ngai and Lindenbaum, by Gordon, by Keeri-Szanto and Lafleur, by McReynolds, Thorgood, and Morris, and by Defalque and

Stoelting. The article by Herber and Specht was published in 1965, and they point out, and they say so in this year, that the 1954 study by 599,548 patients by Beecher and Todd included no deaths from hepatic necrosis. "Liver dysfunction and even massive liver necrosis," Herber and Specht state, "has been linked with the use of the potent, nonexplosive, volatile anesthetic agent, halothane (Fluothane — 2-bromo-2-chloro-1,1,1-trifluoroethane) since its introduction in 1956." These words were published in 1965. "Halothane anesthesia," they wrote, "is further implicated as a cause of hepatic necrosis in the present study, because the incidence of clinically apparent jaundice has increased with the increased usage of the anesthetic agent."

The mortality rate of anesthesia is approximately one in 1600. If the incidence and death rates given in the references in my article are correct, it is entirely possible that patients who receive halothane are being subjected to a mortality rate (Herber and Specht feel that the incidence of posthalothane hepatic dysfunction is "one case in about 800 anesthetics," and I have collected 35 deaths in 66 cases, a mortality rate of at least 50 per cent, which may add an additional death rate of one in 1600) that has been doubled. And as for the "sixty-six retrospective cases," there isn't any other kind.

If, as Dr. Fieber says, hepatic complications have always existed, why were there no deaths due to hepatic necrosis in 599,548 cases in the study by Beecher and Todd? If he believes that halothane is "not particularly injurious to the liver," I suggest that one read the package literature, which states that fatal massive hepatic necrosis may occur. If this is a "year of enlightenment," why do Herber and Specht state, in this year, that dysfunction and necrosis of the liver are linked with the use of halothane? My article asked for study and for resolution of the question. It said that it was possible that halothane is hepatotoxic. It said we do not know. I still say so.

Let me make my point quite clear. If I am able to find figures that indicate that a



drug may be dangerous, I may show them. It has always been the custom to quote from articles; that is what I have done, and I cannot pretend to understand Dr. Fieber's objection. But my second point is far more important. If I offer a series of cases that suggests that a drug may be dangerous, and if he then finds one that supports his argument, he is in no position to dispose of my evidence. One series does not cancel another. He has got to deal with my figures, even if he does not like them. And a "good" series and a "bad" series do not add up to safety; they add up to doubt. If he thinks 1962 is a better date, then I will be glad to give him the addresses of the authors of the fifteen publications that have appeared since then, and if he is sure that halothane is not hepatotoxic, I shall be happy to show him the package literature that has something important to say about liver injury, in capital letters. And if ten doctors or if twenty, "feel" that a drug is safe, it is no safer than when one man thinks so. "If all mankind," said Mill "minus one, were of one opinion, and only one person were of the contrary opinion, mankind would be no more justified in silencing that one person, than he, if he had the power, would be justified in silencing mankind."

I am glad to know that Dr. Fieber thinks this is a year of enlightenment. There has never been a year but it was thought to be a year of enlightenment. Some time later, every year becomes, as all years do, one when we wondered how men could have thought as they did. It takes far-seeing individuals to realize and to say that our thoughts are *not* perfect, and that we are *not* enlightened. In 1846 Oliver Holmes, such a man, knew that our efforts were not precise and were often unavailing, and said that if all the medicines then being used were poured into the ocean, it would not harm mankind, but it might be bad for the fish. Since Dr. Fieber does not like an article that suggests that halothane *may* be hepatotoxic, and feels that he is required to answer an article that says so in 1965, he should also reply to Doctors Herber and Specht. And to those who preceded them in 1963 and 1964.

"New Drugs" has just *today* come to my desk. It is a publication by the Council on Drugs of the American Medical Association, evaluated by the AMA Council on Drugs, and its first (1965) edition is an outgrowth of the Council's previous annual volume, "New and Nonofficial Drugs." "Recently, there have been several reports," it states (page 202), "of deaths caused by massive necrosis of the liver after operations in which halothane was used for anesthesia." This is as new a book as we know of, on any subject; it is a publication by the AMA Council on Drugs. The date on the title page is *nineteen hundred sixty-five*. The word they used is "*recently*."

The 25 references were all quoted correctly. The voice of suspicion has been heard and has not been silenced. But as I have said, the problem is statistical, and nothing else. It makes no difference how much anyone likes the drug, or how he feels. *What are you going to do with the figures?* They are all correct. And if my article is "no more than a review of past events," that's what a statistical study is supposed to be. Meanwhile, the articles calling attention to the hepatotoxicity of halothane continue to appear. In *nineteen sixty-five*.

Frank Cole, MD  
Clinical Associate in Surgery,  
University of Nebraska  
College of Medicine;  
Diplomate, American Board  
of Anesthesiology.

## THE MONTH IN WASHINGTON

The Public Health Services Advisory Committee on Immunization Practices has predicted increased amounts of influenza in the coming season (1965-66).

The committee again recommended immunization for persons in groups who experience high mortality from epidemic influenza. Vaccination, the committee said, should begin about Sept. 1, and ideally be completed by mid-December.

"It is important that immunization be carried out before influenza occurs in the immediate area since there is a two-week

interval before the development of antibodies," the committee said.

Groups for which annual immunization were recommended:

"(a) Persons at all ages who suffer from chronic debilitating disease, e.g., chronic and cardiovascular, pulmonary, renal or metabolic disorders; in particular:

- "1. Patients with rheumatic heart disease, especially those with mitral stenosis.
- "2. Patients with other cardiovascular disorders such as arteriosclerotic heart disease and hypertension, especially those with evidence of frank or incipient cardiac insufficiency.
- "3. Patients with chronic bronchopulmonary disease, for example, chronic asthma, chronic bronchitis, bronchiectasis, pulmonary fibrosis, pulmonary emphysema, pulmonary tuberculosis.
- "4. Patients with diabetes mellitus and Addison's disease.

"(b) Persons in older age groups.

"(c) Pregnant women.

"(d) Patients residing in Nursing Homes, Chronic Disease Hospitals, and other such environments should be considered as particular risks since their more crowded living arrangements may allow for greater spread of disease once an outbreak has been established."

The committee reported that there were cases of influenza in a majority of the states in the eastern two-thirds of the country during last season (1964-65) but that the amount of the disease in the United States as a whole was limited. There was no major epidemic anywhere in the country and most states in the far west were unaffected.

The committee said that Type A influenza viruses may predominate in 1965-'66 but that Type B outbreaks also could be expected.

As to vaccine efficacy, the committee said:

"Influenza vaccine has consistently shown a substantial protective value when the viruses incorporated in the vaccine were antigenically similar to those causing the epidemic disease. Exceptions to the vaccines' apparent effectiveness have occurred in instances when the prevalent virus underwent a major antigenic shift after vaccines had been formulated. Careful study goes into the annual design and updating of the composition of influenza vaccines. The final selection of components reflects the best judgment regarding a potent, contemporary vaccine.

"That influenza vaccine prevents mortality from influenza, particularly among the aged and chronically ill, is based upon inference. It is presumed that vaccine protection demonstrated in studies among younger persons is similar among the aged and chronically ill, the group at particular risk of death should they acquire the disease. It is further assumed that such protection against clinical disease serves to protect them also against mortality associated with epidemic influenza."

Congress has approved legislation imposing stiff Federal controls on the manufacture and sale of amphetamine and barbiturate tablets.

The American Medical Association supported the legislation which was aimed at curtailing use of the drugs as "pep pills" and "goof balls."

In requesting the legislation, Food and Drug Administration Commissioner George P. Larrick told Congress that half of the nine billion amphetamines and barbiturates manufactured annually have been sold on the black market to teen-agers, truck drivers and persons searching for a substitute for marijuana, heroin or cocaine.

The version of the legislation as finally approved left it up to the Secretary of Health, Education and Welfare whether he utilizes an advisory committee before deciding whether depressant or stimulant drugs have a bad effect on a person's personality. The AMA had recommended that this provision be mandatory.



The new law also requires detailed book-keeping on the drugs by manufacturers and wholesalers. Druggists' sales records of the pills must be open for inspection by FDA agents. This provision aimed at keeping track of retail distribution of the prescription drug.

The record-keeping and inspection provisions will not apply to licensed physicians with respect to drugs received and used in the course of their practice, unless the practitioner regularly engages in dispensing the drug to his patients for which they are charged, either separately or together with charges for other professional services.

In its reports, the House and Senate committees stated that the legislation was intended "to require record-keeping and to permit inspection in the case of those physicians who maintain a supply of pharmaceuticals or medicinals in their offices from which they compound prescriptions for their patients for a fee." The House committee report contained identical language.

The new law also provides that a prescription for a depressant or stimulant drug cannot be filled or refilled more than six months after its date of issue, nor can such a prescription be refilled more than five times. However, a physician can renew the prescription either in writing or orally, if promptly reduced to writing and filed by the pharmacist filling it.

Congress has approved legislation to require a health warning on all cigaret packages.

The compromise legislation, worked out by House-Senate conferees last week, would bar any similar warning in cigaret advertising for four years.

The warning required by the legislation reads: "Caution: cigaret smoking may be hazardous to your health."

The new law leaves to the manufacturer's discretion the exact location of the warning but says it must be in a conspicuous place. It also requires that the warning must appear in conspicuous and legible type

in contrast by typography, layout or color with other printed matter on the package.

The prohibition against any action by any government agency in regard to cigaret advertising applies most directly to the Federal Trade Commission.

The FTC had announced plans to require cigaret advertising to be accompanied by a health warning similar to that which the legislation requires on the package.

If no further legislation is passed by Congress by July 1, 1969, the FTC will be free to go ahead with its advertising proposal.

During the next four years, the FTC and the Department of Health, Education and Welfare will submit periodic reports to Congress on whether the package label has any effect on cigaret consumption.

The congressional decision to require a health warning on cigaret packages stemmed largely from a report by the U.S. Surgeon General's office which linked smoking to lung cancer and other disease.

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**Effect of Urography on Renal Function in Patients With Multiple Myeloma — M. Brown and J. D. Battle (2020 E. 93rd St., Cleveland). Canad Med Assoc J 91:786 (Oct. 10) 1964.**

This study was prompted by reports in the literature of seven patients with multiple myeloma who died of acute renal failure following intravenous urography. From 1940 to 1960, 39 patients with multiple myeloma had intravenous urography at the Cleveland Clinic. Four patients developed acute renal failure and two died within three weeks. All four revealed evidence of renal damage or insufficiency, or both, prior to urography. Thirty-five patients, 15 of whom had renal damage, had no untoward reaction to intravenous urography. These observations suggest that urography is associated with a small, but definite risk to patients with multiple myeloma who have renal involvement.





# Books



**"Ophthalmology — Principles and Concepts"** by Frank W. Newell, MD. Published 24 May 1965 by The C. V. Mosby Company of St. Louis. 491 pages with 172 illustrations. Price \$12.25.

This book was not written to prepare the student to practice ophthalmology but rather to provide him with a guide to the recognition of minor and serious ophthalmic disease and ocular signs of systemic disorders. Diseases of the eye are discussed without emphasis upon refraction, optics, biomicroscopy, and similar areas in which the nonspecialist rarely becomes involved. Systemic diseases are presented so as to emphasize the fundamental abnormality of the primary disease process rather than the involvement of a particular portion of the eye. The text has been prepared so that the student, undergraduate and graduate, will be able to interpret intelligently the symptoms arising from abnormalities of the eye and will be able to carry out a meaningful examination.

The author is Professor and Head of the Section of Ophthalmology at the University of Chicago.

**"Synopsis of Cardiology"** by W. I. Geffer, MD; B. H. Pastor, MD, and R. M. Myerson, MD. Published 28 May 1965 by The C. V. Mosby Company of St. Louis, Missouri. 877 pages (5" by 8") with 240 illustrations. Price \$9.85.

The voluminous literature in the field of cardiology is a challenge even to the specialist. It is virtually impossible for the practicing physician to read the many books dealing with this subject. The authors have summarized the various aspects of cardiovascular disease in a concise, up-to-date, and readable form without sacrificing completeness. This book will prove of value to students of medicine at all levels of interest and training who wish to increase their knowledge of this important part of clinical medicine.

Doctor Geffer is a Professor of Medicine at Woman's Medical College of Pennsylvania. Doctor Pastor is Chief of the Cardiovascular Section of the Veterans Administration Hospital in Philadelphia. Doctor Myerson is Assistant Chief of the Medical Service of this same hospital.

**"A Primer of Cardiac Catheterization"** by R. C. Kory, MD; T. J. Tsagaris, MD, and R. A. Bustamante, MD. Published 15 May 1965 by Charles C. Thomas of Springfield, Illinois. 114 pages (6" by 9½") with 74 illustrations. Price \$7.50.

The authors are all members of the staff of Marquette University School of Medicine, Milwaukee, Wisconsin. Their monograph provides a concise introduction to cardiac catheterization techniques. It is not intended for the experts, but for medical students, interns, residents, and all those

physicians whose primary interests are in fields other than cardiology.

Emphasis throughout is on the interpretation of data obtained from catheterization procedures rather than on the technical performance of these procedures. The newer techniques of selective angiocardiology are described in a chapter richly illustrated with representative angiocardiograms. Up-to-date tables of normal values for the various measurements are included in the Appendix. Special areas discussed include the following:

- Normal and abnormal catheter positions
- Pressure tracings from each cardiac chamber
- Methods for measuring cardiac output
- Uses of indicator-dilution curves
- Determination of vascular resistances and valve areas
- Methods for detecting intracardiac shunts
- Methods for measuring valvular regurgitation

**"From Auscultation to Phonocardiography"** by A. Luisada, MD. Published 14 June 1965 by The C. V. Mosby Company of St. Louis. 351 pages (7" by 10") with 196 illustrations. Price \$17.75.

The author is Director of the Division of Cardiology at Mount Sinai Hospital, Chicago, and Professor of Cardiovascular Research at The Chicago Medical School. His book is based on 25 years of experience with phonocardiography.

This book is divided into four major parts:

- Physiology of heart sounds and murmurs
- Auscultation
- Technical aspects of phonocardiography
- Clinical phonocardiography

This book will be of special value to the doctor with particular interest in heart disease. It should also prove of value to medical students.

**"Human Foetal and Neonatal Circulation"** by John Lind, MD; Leo Stern, MD, and Carl Wegelius, MD. Published in 1964 by Charles C. Thomas of Springfield, Illinois. 54 pages (7" by 10") with 32 illustrations. Price \$5.75.

Based largely upon radiographic and angiographic studies, this monograph is extensively illustrated in order to make an informative contribution to present knowledge of the dramatic changes that occur at birth. Part One describes graphically the foetal circulation. Part Two deals with the subsequent evolution and changes occurring with the onset of extra-uterine life. Each section consists

first of a general outline followed by detailed analysis of the parts of the circulatory system and their physiologic behavior.

The authors are two pediatricians and one radiologist. They are all associated with the Wenner-Gren Research Laboratory in Stockholm.

**"Sinoatrial Heart Block"** by R. J. Greenwood, MD, and David Finkelstein, MD. Published in 1964 by Charles C. Thomas of Springfield, Illinois. 94 pages (6" by 9½") with 6 illustrations. Price \$4.50.

This is the most complete compilation of material dealing with sinoatrial heart block ever assembled. Sinoatrial heart block has often been considered an innocuous type of arrhythmia. This book shows that although sinoatrial heart block may be a solitary finding in a patient with no indication of heart disease, it frequently is a manifestation of myocardial damage or drug intoxication and occasionally the result of metabolic alterations.

The authors are members of the staff of the University of Pennsylvania School of Medicine.

**"The Doctorate"** by George K. Schweitzer, PhD, ScD. Published 20 May 1965 by Charles C. Thomas of Springfield, Illinois. 106 pages (6" by 9"). Price \$4.75.

Since 1900 the number of doctoral degrees awarded has increased with each passing year. This increase is a reflection of a growing demand for highly-educated persons in practically all professions. In 1964 over 25,000 doctorates were granted.

This handbook was written to set forth in brief compass the history, the present status, the etiquette, and the ceremony of the various doctoral degrees. It is intended for all holders of doctorates and for those who come into contact with them. Its functions are to inform, to explain, and to clarify.

**"Comparative Biochemistry of Arginine and Derivatives"** — Ciba Foundation Study Group No. 19 — edited by G. E. W. Wolstenholme, FRCP, and Margaret P. Cameron, MA. Published in May 1965 by Little, Brown and Company of Boston. 103 pages (5" by 7½") with 11 illustrations. Price \$2.95.

Twenty-one eminent authorities from England, Italy, U.S.A., Scotland, Belgium, and France assembled on April 11, 1964 to discuss the subject listed in the title of this book. Papers read and discussed included the following:

- a. New aspects of the metabolism of arginine
- b. Homoarginine, gamma-hydroxyarginine and related compounds
- c. Transamidination and the biogenesis of guanine derivatives
- d. Co-ordination between repression and retroinhibition in control of a biosynthetic pathway...

**"Steroid Analysis by Gas Liquid Chromatography"** by A. A. Patti, MS, and A. A. Stein, MD. Published in 1964 by Charles C. Thomas of Springfield, Illinois. 95 pages (6" by 9") with 30 tables and 17 figures. Price \$5.50.

The authors are on the staff of the Albany Medical College at Albany, New York. They present their observations utilizing gas-liquid chromatography (GLC) for steroid analysis in biological fluids and tissues.

Selected methods which give reproducible results with semi-purified extracts and which permit the separation and identification of one or more steroids in biological fluids are described. The methods have been chosen for rapid clinical screening.

**"Accident Injuries of the Conjoined Femur"** by Jacob Kulowski, MD. Published in 1964 by Charles C. Thomas of Springfield, Illinois. 294 pages with over 500 photographs, radiographs, and drawings. Price \$12.50.

This book is concerned with the clinical and para-clinical aspects of automotive and comparable injuries of the hip, femur, and knee. The author is an orthopedic surgeon in Saint Joseph, Missouri. His book is based chiefly on his personal extensive orthopedic experience with injuries, mostly those resulting from automobile accidents, occurring between 1949 and 1964.

This book is intended to aid the doctor in diagnosis and treatment, to help the engineer in the automotive design area to help design cars to prevent these injuries, and to assist lawyers in evaluating these steadily increasing personal injury cases.

Chapter headings include the following:

- a. Factors in automotive accidents
- b. From road-bed to hospital bed
- c. Single injuries of the hip
- d. Posterior fracture-dislocation of the hip
- e. Fraternal fractures of the shaft of the femur
- f. Injuries of the knee
- g. Fractures of the patella
- h. Bioengineering problems of prophylaxis

## TUBERCULOSIS ABSTRACTS

### CURRENT THERAPY IN CYSTIC FIBROSIS

Once a fatal disease in young children, cystic fibrosis is now being treated with encouraging results. Therapy is directed at both the digestive and pulmonary aspects of the disease. Early diagnosis and intensive treatment can enable the patient to reach adulthood.

Cystic fibrosis once was almost 100 per cent fatal in early childhood. Improved diagnosis and treatment have changed the prognosis. The treat-



ment program developed in the past six years at the Cystic Fibrosis Research, Teaching and Care Center of the Babies and Children's Division, University Hospitals of Cleveland, is reported here.

Cystic fibrosis is transmitted as a mendelian recessive trait and is one of the more common hereditary diseases, occurring in about one of every 2,000 live births.

The basic defect in the disease is unknown. Current evidence indicates that it is a disease of the exocrine glands. The mucous glands of the respiratory system and gastrointestinal tract (including the pancreas and liver) produce an abnormally thick and viscid mucus. The sweat glands produce sweat with abnormally high salt content and the parotid glands secrete excessively.

One of the aids in diagnosis is the sweat test. This is a simple, accurate, and safe diagnostic procedure. By providing localized sweat stimulation, the pilocarpine iontophoresis technique or an intradermal injection of methacholine eliminates the necessity for the less reproducible and sometimes hazardous thermal sweating procedures. When a sweat test is negative in a suspicious case, the test should be repeated. Diagnosis should not be made on the sweat test alone.

### SYMPTOMS

The most prominent symptoms in cystic fibrosis arise from the digestive and pulmonary systems. The abnormally viscid secretions obstruct the pancreatic ducts and cause a deficiency of pancreatic digestive enzymes.

Pulmonary symptoms usually develop in early infancy. A chronic cough may be followed by recurrent episodes of pneumonia or by attacks of wheezing respiration which may be mistaken for bronchiolitis or asthma. The early pulmonary findings are not striking and might easily be dismissed. Mild signs of air trapping, a few rales, a slight increase in cough, and no weight gain must be looked for and treated vigorously to prevent the pulmonary lesion from progressing.

The primary pulmonary lesion is thought to be the accumulation of viscid secretions in the tracheo-bronchial tree. The mucus appears to impair the normal cleansing mechanism of the lung. The result is obstruction and stagnation of secretions and the development of secondary infection, which is usually due to *Staphylococcus aureus* and *Pseudomonas aeruginosa*.

If extensive damage occurs, bronchiectasis develops and abscess cavities form. These areas become reservoirs of infection. Reinfection, increased obstruction, and rapid progression of the pulmonary lesion are likely to occur.

### TREATMENT

Therapy is directed against the primary obstructive pulmonary lesion, the secondary pulmonary infection, and the pancreatic exocrine defect and nutritional deficiencies.

Among the treatment methods used at the Center are nebulization therapy. This is a means of depositing particulate water in the respiratory tract by use of a mist tent, and of depositing various medications through intermittent aerosol inhalations.

All patients with pulmonary involvement should inhale a dense mist during sleeping hours. In periods of active pulmonary disease, continuous day and night therapy is sometimes used. Mist-tent therapy is used nightly as a prophylactic measure even in patients with minimal evidence of pulmonary involvement.

Intermittent aerosol therapy permits the deposition of decongestant, antibiotic, bronchodilator, and mucolytic agents. Aerosol treatments are given three to four times a day.

The use of oxygen is discouraged, even in the hospital, unless it is specifically indicated.

Coughing and expectoration are encouraged before and during aerosol treatments. Each treatment is followed by postural drainage and physical therapy to help remove secretions from the major bronchi of the lung. The patient must be carefully positioned so that the major bronchi of the affected lobes or segments of the lung will drain efficiently.

Initial hospitalization is recommended for a complete evaluation and to bring the pulmonary disease under control. The parents are instructed in the nature of the disease, the reasons for the therapeutic procedures, and the techniques utilized.

Prophylactic antibiotics are not used after hospital discharge because of the danger of drug resistance. They may be prescribed on follow up in accord with sensitivity studies.

Upper airway disease is appropriately treated. This helps prevent pulmonary disease.

Patients who have a pancreatic insufficiency should receive treatment for the digestive disturbance. Patients without chronic infection usually have a voracious appetite and thus gain despite their digestive defect. Frequent feedings for small infants are usually necessary. Control of the pulmonary infection is the most important factor in maintaining them in a good nutritional state.

### LOW-FAT DIET

Small infants should receive a low-fat, high-protein formula on demand and should be started on solid foods, including meat, when they are two months old. Older children are maintained on a high-protein diet.

Pancreatin is prescribed when a significant fat absorption defect is present, the dosage being based on the degree of the defect.

During warm weather, salt supplements help prevent heat prostration and shock.

All immunizations are carried out routinely. Influenza prophylaxis and the use of measles vaccine are especially important.

Emotional factors play a major role in any chronic disease — both for the patient and for the family. An interested, sympathetic physician can offer support for the patient and his family. Social service and psychiatric aid should be used freely.

The aim of treatment is to prevent progression if possible. Flare-ups do occur, even in well-treated children.

Since the initiation of the therapeutic program described in July, 1957, the annual mortality from



cystic fibrosis among patients admitted to Babies and Children's Hospital has been less than 2 per cent annually.

This experience indicates that most patients who are diagnosed early and treated intensively should live into adulthood.

— Carl F. Doershuk, MD, and Leroy W. Matthews, MD, GP, February, 1964.

## EFFECTS OF MEASLES AND MEASLES VACCINE ON THE TUBERCULIN TEST

Tuberculous children with measles, measles modified by gamma globulin, or vaccinated against measles had a depressed reaction to the tuberculin test, raising the question whether the vaccine may have a deleterious effect on undetected childhood tuberculosis.

Twenty-two tuberculous children in whom typical measles developed in the spring of 1962 were studied at Kings County Hospital Center. Seven were admitted with measles and found to have tuberculosis. Measles developed in 15 tuberculous children in the hospital, 8 of these being modified by gamma globulin. The measles was mild to moderate in all the children, with complications in only two — a pneumonia and a mild encephalitis.

In addition to these 22 children, two separate groups of tuberculous children were given live measles vaccine and studied in similar fashion. Group 1 consisted of 14 children who were exposed to a child with measles prodromes and given 1 ml. of live measles vaccine two days later along with gamma globulin, 0.2 ml. per pound of body weight. Group 2 consisted of 10 children without exposure to measles who were given live vaccine without gamma globulin. Nine of the children in Group 1 and 6 of those in Group 2 had clinical and laboratory evidence of vaccine measles. Each had significant antibody-titer changes.

All the children were given isoniazid and para-aminosalicylic acid (PAS) throughout the period of the study, which for each child was about a year.

All children were tested on the forearm every two or three days with freshly prepared PPD. Readings were made at 48 hours and recorded as the average diameter of induration. The criterion for a positive reaction was induration over 5 mm. in average diameter.

## DEPRESSED REACTIONS

Measles unmodified by gamma globulin was present in 14 of the 22 children with tuberculosis and measles. Seven were admitted to the hospital with measles, and measles developed in 7 during the hospital stay. Twelve of 13 children tested between the fifth and ninth day after the onset of rash showed negative reactions to tuberculin. From the tenth through the fifteenth day only 2 tuberculin tests of 8 were negative, and from the sixteenth through the twentieth none of 4 readings was negative. The average length of time before the tuberculin test turned positive was 18 days. One reaction was negative 42 days after the appearance of the measles rash.

In the 8 tuberculous children in the hospital who were exposed to measles and contracted gamma-globulin-modified measles, the tuberculin reaction became negative 12 to 22 days before the rash. Beginning with the fifth day after the appearance of rash, positive readings developed. The average interval before the tuberculin test turned positive was 17 days.

Among the children in Group 1, 6 of 14 with no exposure to regular measles were given live-virus vaccine and contracted definite vaccine measles. These children showed variable depression of the tuberculin test, but in most the change was of shorter duration and of lesser degree than in natural measles or gamma-globulin-modified measles.

In addition, 9 of the 10 children in Group 2 were exposed to wild measles and given live vaccine with gamma globulin separately. All but 1 showed depressed tuberculin tests. In these children the combined effect of vaccine measles and incubating measles on the tuberculin test cannot be ruled out.

## NO INCREASED PPD SENSITIVITY

At no time, in any of the children studied, was a distinctly increased tuberculin sensitivity found in the incubation period. The tuberculin reaction was diminished in at least half of the readings in the incubation period of gamma-globulin-modified measles.

There was little difference in the tuberculin-test changes with regular and gamma-globulin-modified measles. The uniform depression of the tuberculin reaction in the first four days with rash and the appearance of a few positive skin tests in the next five days was confirmed. In both groups the interval during which the more dilute tuberculin tests were negative or depressed averaged about 17 days.

Since the depressed reaction to PPD during measles returned to its previous levels in all but 2 cases, we believe that desensitization from repeated testing was not a major factor.

Of the diseases that depress the tuberculin reaction, measles does so more uniformly and more strongly than any other. Any explanation of this effect must include the action of measles virus in the incubation period and for a period of weeks after full recovery. Fever and toxicity are obviously not the cause of the change in sensitivity. Since the tuberculin sensitivity may be depressed even when there is no rash, the exanthem of measles is not the critical factor.

The only children given measles vaccine who showed depression of tuberculin sensitivity were those in whom vaccines measles with evidence of increased antibody titer developed. Gamma globulin alone caused no such change.

## POSSIBLE EXPLANATION

It has been reported that early in the incubation period of measles lymphoid tissue throughout the body may be hyperplastic, and multinucleated giant cells are found in lymph nodes, tonsils, and adenoids, spleen and appendix. These cells are seen as early as five days after exposure to infection and

appear to arise from lymphocytes. Since the measles virus produces such changes in lymphoid tissue and since the lymphocyte seems to be the cell involved in delayed sensitivity, one possible interference with tuberculin sensitivity may be a direct action of the virus on this function of the lymphocyte.

Another factor that must be considered is that the measles virus may cause an increased production of an anti-inflammatory steroid, which would then cause a depressed tuberculin reaction. This possibility requires attention because of the striking coincidence that measles can cause remission of nephrosis, can cause detrimental effects on the course of tuberculosis, and can depress tuberculin sensitivity. Furthermore, measles rarely causes asthmatic symptoms to flare up in children with recurrent asthma.

The relation of the changes in tuberculin allergy during measles to the possible deleterious effect of measles on the course of tuberculosis is only conjecture. Since vaccine measles in our cases depressed the tuberculin reaction, vaccine measles may also have deleterious effects in certain undetected and untreated cases of childhood tuberculosis.

—Saul Starr, MD, and Sumner Berkovich, MD; The New England Journal of Medicine, February 20, 1964.

DOCTOR — Does your wife like to read the Auxiliary news? Then be sure and take your copy home.

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(Please help us keep these addresses correct, by notifying the Editor of any changes).



## THE NEBRASKA STATE MEDICAL JOURNAL

FAREWELL TO THE ISLANDS OF  
LANGERHANS

When we were very young, it was necessary to learn things called synonyms, only to be told later that there were no synonyms in the English language; after that came homonyms, antonyms, and pseudonyms. A somewhat recent development is the acronym, which threatens to enrich or to sully our speech. We have never been overly fond of homonyms and pseudonyms, and we are rather undecided about radar and unraa. But the passing of the eponym cannot but sadden us. What was once Poupart's ligament has become the inguinal ligament. Glorious names like Vater, Santorini, Scarpa, Nelaton, and Stensen were wonderful to remember. We had no trouble learning them. Indeed, they were something of a help in passing anatomy examinations, if one could only remember the appropriate mnemonic jingle. What difference can it make if we do not know who Bartholin was, as long as we remember what he did? And if we change the name of leprosy to Hansen's disease, we may be accused of going the wrong way. Even the artery with that wonderful name, innominate (A. anonyma), has now got a real name.

Well, they are going to have to do something about the Bassini procedure, the Sylvester technique, Salk vaccine, Courvoisier's sign, Parkinsonism, the foramen of Munro, Meckel's diverticulum, Auerbach's ganglion, and the canal of the Nuck. When they have done that, we will come up with Bell's palsy, the Scanzoni maneuver, McArthur's method, Garland's curve, Sprengel's deformity, Dalrymple's disease, Stange's test, the Austin Flint murmur, and Gabriel's pessary. Then we will tell them about Littre's hernia, Dupuytren's contracture, Macewen's triangle, Agazotti's mixture, Billroth's strands, Coley's fluid, and Velpeau's bandage. And Vella's fistula, Frohlich's syndrome, McGraw's ligature, Dalton's law, Avagadro's hypothesis, Koch's postulates, Gartner's phenomenon, Friedlander's bacillus, and Sooke's reflex. As well as the McBurney inci-

sion, the Dale reaction, Meglin's point, the Meibomian glands, the Apgar score, the Fothergill operation, and Wharton's jelly. And the organs of Zuckerkandl.

Fortunately for us, the list is endless; there are Aschoff's nodes and Cohnheim's area and Becquerel's rays and Ranke's angle. They may call Ramstedt's operation pyloromyotomy, but it will do no good. If they succeed, the Hippocratic oath may become an oath of allegiance. Our medical history and heritage will become sterile, while the parading figures of the pioneers march past us to oblivion. But we still have Botalli's duct, Meissner's plexus, the ampulla of Thoma, Muller's muscle, Wrisberg's nerve, Denonvillier's fascia, Golgi's cells, and Henle's loop. And the malpighian corpuscles. And the space of Retzius. They may never catch up with us; we are too many for them. You see, there are Howell's bodies and there is Jackson's veil; then there are the Eustachian tubes, Schwann's membrane, Mauthner's sheath, Bertin's bones, and Broca's fissure. And here are Cowper's glands, and Cruveilhier's joint, and Stilling's raphe, and Rathke's pouch, and Ganser's symptom. And Trendelenburg's position. And did not Chassaignac have his tubercle, Clarke his rule, and Oddi his sphincter?

Surely we owe these discoverers and inventors more than this, that their names be forgotten when their work is done; it smacks too much of the iron curtain policy of removing names from history books. Perhaps we cannot halt the march of progress. Eponyms tell us nothing, they say. But that marvelous title, the angle of sorrow, and of tears, has something to tell.

Meanwhile a wonderful tradition vanishes from the scene, and anatomy, and other things medical, will be forever different. But we have too many names for the name-droppers, and even now, good men continue to discover and to invent.

"Honour a physician with the honour due unto him."

—F.C.

## QUO VADIS?

We have recently been confronted by a great amount of legislative proposals: the hospital portion of the so-called medicare act; the physician's part of it; the attempt to include anesthesiology, pathology, psychiatry, and radiology in the hospital "bill;" and the plan to establish hundreds of medical centers throughout the country. Now medicare has been passed, and we are faced, individually and collectively, with a decision. What can we and should we do; what do we want to do and what will we do? The words *strike* and *boycott* have been used, and *nonparticipation* appears often. We can do, each or all of us, any of several of these, or we can participate. Or we can vacillate. The good man, says the Lord in the Prologue in Heaven in Goethe's Faust, in his obscure striving, is ever conscious of the correct path. This is the very heart of Faust. When the play opens, he is already, by his own words, lost; he has tried philosophy and science and looking to magic, "up pops the Devil." But though it be dark, as the Lord says, he is well aware of the right way. Our way does indeed seem dark. We are told that this is not socialized medicine and that this is good for everybody. Meanwhile, one editorialist advocates nonparticipation, another condemns it, one pamphlet recommends it as the only answer, one state association deems it "desirable," one society votes for it and then changes its mind, and one group of physicians urges it strongly.

Our purpose is to suggest three things and to call attention to two others. The first is to be informed, to understand the bill as it was passed, and to know the *exact* definitions of any responses we may choose to make. The second is that standing together does not seem bad at this time. The third is that we recognize the consequences of whatever course we choose to follow, *and they exist*. It is better to keep our feet on the ground than to "fly off in all directions." The fourth is simply our desire to say that we are not alone; difficulties like ours have been seen in England, in Canada, in France, in Belgium, in Vienna, and in Italy. We were the vulnerable ones; we alone worked without pay when necessary, and we have

paid. Lastly, let us remember that we are indeed not alone; our representatives intend both to meet and to keep us informed. It seems wise at this time to wait and see, to think, and then to act. "Let us then be up and doing," as Longfellow said, "with a heart for any fate." And let us decide, calmly and wisely, how we shall answer.

—F.C.

## TILL WE MEET AGAIN

We are divided into so many groups: those who are interested primarily in and contribute to research; those who work for us tirelessly, we can only hope, to better us in our workaday life; those who practice and find that all the hours in a day are thereby used; and those who practice and write, and then practice. But there is always a small group that leads us in each needed direction, research, dignity, and economics. It has lately become too easy to ask why our representatives meet now, why those who have been working for us will go on doing what they can; it is too easy, when it is asked by those who did little to help, and who reap the small benefits of what has been salvaged by those who never stopped trying. We will meet, and I mean the AMA, and I am grateful, because I can think of nothing better for our cause. Why didn't they do this long ago is a strange question to be put by those who did nothing to the ones who did what they could and accomplished what we have. The point is that they did everything they could do long ago, and they never stopped, and they never gave up, and they are still fighting our fight for us. I do not mind apathy, we meet it everywhere; but pure negativism and sheer defeatism, when it becomes a positive thing, is something to put down. Anesthesiologists (et al) are not included in the hospital bill, and I am thankful.

—F.C.

## STATEMENT OF BOARD OF TRUSTEES, AMA

"AMA Board of Trustees held special session on August 7-8, Chicago, to discuss Pub-



lic Law 89-97 (Social Security Amendments of 1965) and related matters. Information re this meeting is being disseminated by TWX or special delivery air mail to state medical association presidents and presidents-elect, headquarters of state medical associations and metropolitan medical societies, members of the AMA House of Delegates, and state medical association editors.

"Since the medicare bill has become Public Law 89-97, the Board of Trustees feels that its role should be to give advice and guidance to the Secretary of Health, Education and Welfare to the end that programs developed and regulations promulgated will provide the stated benefits in the most meaningful manner to our patients with a minimum of disturbance and inconvenience to the medical profession.

"The Board has appointed the following Advisory Committee to represent AMA in discussions re this law with Secretary of HEW and his staff: President James Z. Appel, Chairman; President-Elect Charles L. Hudson; Secretary-Treasurer Raymond M. McKeown, Trustee Dwight L. Wilbur, and Chairman of Council on Medical Service Russell B. Roth. The Office of the Executive Vice President will staff this Committee.

"This Committee holds organizational meeting Friday, August 13. Presumably subcommittees will be appointed in special areas. This Committee will consult with HEW officials regarding implementation of law and regulations to be promulgated. Its recommendations will be reported regularly to Board of Trustees and through Board to the House of Delegates and other appropriate groups.

"Board considered action of House of Delegates in June: 'Resolved, That when the fate of the pending medicare legislation is determined, this House will review, in special session if necessary, the effect of the law and take whatever action is deemed necessary;' and after careful review of current situation took no action to convene special session in view of imminence of November

session in Philadelphia when much more information regarding regulations and related subjects will be available.

"As reported in earlier TWX, pursuant to House of Delegates directive regarding re-statement of offer to meet with President, Task Force of Board of Trustees met with President Johnson on July 29 and subsequently with Secretary Celebrezze and HEW officials. The President and HEW asked AMA to participate in formulation of regulations and assured AMA Task Force that no regulations would be finalized without full AMA opportunity to evaluate and recommend changes.

"The following is a summary of the items discussed by legal counsel at the meeting of the Board of Trustees on August 8, 1965:

"1. Physicians acting alone or as a group through their medical organizations may freely criticize Public Law 89-97 and may seek its repeal or modification.

"2. An individual physician acting independently and not in concert with others can lawfully refuse to accept any person as a patient who is a beneficiary under the program.

"3. The physician's right to practice in a hospital is not vested; he is obligated to abide by the reasonable rules and regulations imposed by the hospital administration. Such rules and regulations may directly or indirectly require the cooperation of the physician in assisting the hospital to participate as a provider of services under the law.

"4. Although Public Law 89-97 provides that nothing in this law 'shall be construed to authorize any Federal officer or employee to exercise any supervision or control over the practice of medicine or the manner in which medical services are provided,' other laws, such as the Sherman Antitrust Act, may apply to certain situations involving group action.

"5. The basic principle of antitrust laws is to prohibit private restraints which oper-



ate to impede a competitive economy; and action by an organized group of individuals in refusing to deal with others has been held illegal. When such restraints adversely affect those engaged in providing health services, such as hospitals, nursing homes and carriers, relief may be provided by law. The Sherman Antitrust Act delegates to the courts broad powers to interpret and apply the prohibitions of the law, case by case, in civil and criminal actions brought by the Department of Justice and by private persons.

"6. Conspiracy under the antitrust laws may emanate from a common understanding or an express or implied agreement. In a number of cases involving medical organizations, statements of policy by the organization, such as resolutions and 'ethical' rules of conduct, have been interpreted as evidence of conspiracy under the particular facts and circumstances.

"7. If physicians acting in concert through medical organizations refuse to participate in the program, such action would involve exposure to the application of the Sherman Antitrust Act.

"The Board of Trustees will present thoroughly documented and extensive report to House of Delegates at its regular session in Philadelphia discussing all aspects of the new law as it affects the profession, legal questions involved in participation and non-participation, relationship of the carriers to government and to the profession, the effect of the law on pathologists, radiologists, and other specialty groups, and the important new provisions in the Kerr-Mills medical assistance program.

"The Board will spare no effort to keep you completely informed of developments as they occur. Every channel of communication available will be utilized as indicated.

"Meanwhile, the Board urges all physicians and especially leaders of state and county medical societies to face the problems ahead with restraint, a clear mind, and unity."

## DELEGATES' REPORT ON THE 114TH ANNUAL CONVENTION OF THE AMA

The 114th Annual Convention of the American Medical Association was held at the Americana Hotel in New York City on June 20 to June 24, 1965.

The first meeting of the House of Delegates was held on Sunday, June 20, 1965 at 3:30 p.m. in the Imperial Ballroom at the Hotel.

The House of Delegates was called to order by the Speaker, Milford O. Rouse. The invocation was given by Rev. Wilbur Trexler of Lancaster, Pennsylvania. The St. John's University Chorus then sang several numbers.

The Credential Committee then reported. The House of Delegates finally seated 234 out of the 235 delegates.

The Presidents of the various State Medical Societies were seated on the speakers platform along with other honored guests. They were then introduced by the states they represented.

Dr. Donovan Ward, President of the AMA, then gave his Presidential Address.

Following this the new President of the AMA, Dr. James Z. Appel was installed and gave his Inaugural Address. He suggested the duties of doctors under Medicare. He stated, "the medical profession must comply with health care legislation enacted by Congress but should at the same time work toward amending the law so that it approaches the principles embodied in the American Medical Association's Eldercare Program."

Outlining his personal platform he emphasized that such a campaign must be based on "reason, logic, and education," rather than "unethical tactics such as boycott, strike, or sabotage."

He listed five responsibilities which must be met by the nation's physicians if the Medicare Bill now pending in the Senate Finance Committee becomes law.

1. To continue to provide the highest quality of care to all Americans.

2. To take part in formulating the rules and regulations of the program, if it becomes a law.
3. To participate in the actual implementation of the legislation, if it becomes a law.
4. To contain the law so that it cannot be broadened by Congress as an election year vote-getting measure.
5. To develop support for amending the legislation so that it approaches the Eldercare Plan.

Dr. Appel says, "society depends for its orderly existence upon law."

"A federal law," he continued, "is a verbal interpretation composed and approved by Congress of the intentions of the people. Every individual has the right and the privilege to decide whether this law or any law is good or bad, right or wrong, moral or immoral. However, regardless of our personal opinion, we do not have the right — either as physicians or citizens — to violate a law, or to violate the spirit of the law or its intent. Those who believe they have such a right, and who act accordingly, only encourage similar attitudes and actions by others in respect to other laws which interfere with their desires, emotions, or ambitions. Respect for law and order, piece by piece, is broken down. Eventually this leads to a lawless society, to complete anarchy," he said.

I have only quoted from a portion of Dr. Appel's address in order that you may know some of his views concerning the pending Medicare legislation. There were some favorable and unfavorable comments among the members of the House of Delegates.

The most controversial issue before the House was that of nonparticipation under any so-called "Medicare Law" that might be passed by Congress. This subject came up in various ways in nine resolutions and in portions of Dr. Appels' Inaugural Address.

The House recommended that the members of the American Medical Association be reminded that it is each individual physician's obligation to decide for himself whether the conditions of a case for which he is about

to accept responsibility permit him to provide his own highest quality of medical care.

In adopting a substitute resolution, the House declared that, "the physicians of the United States of America pledge themselves to continue their search and activity, in whatever social environment may develop, to secure or to restore the freedom, high quality and availability of medical care which has been traditional in our country."

When the fate of the pending Medicare Legislation is determined, this House will review, in special session if necessary, the effect of the law and take whatever action is deemed necessary.

After hearing all the testimony the House reaffirmed its stand on Section 6 of the "Principles of Ethics" which plainly states, "a physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause deterioration of the quality of medical care," and also the principles of the Bauer Amendment adopted in 1961.

The House of Delegates reaffirmed the nine principles for the standards of health care programs as adopted by the House of Delegates in its special meeting February 7, 1965, and amended to read as follows:

1. No person needing health care shall be denied such care because of inability to pay for it.
2. It is appropriate that government revenues be used to finance health care when other resources have been found to be inadequate.
3. Every level of government, municipal, county, state, and federal should assume a responsible share in the financing of such programs.
4. The health care provided by such programs should be adequate and should be equal to that available to those who can afford to pay.
5. Maximum use should be made of voluntary prepayment and insurance mechanisms.



6. Administration of such program should be the responsibility of the state government. Participating states should be required to meet adequate standards of administration in order to qualify for federal funds.
7. Eligibility requirements for benefits should be fair, realistic, uncomplicated, and practical.
8. Any such health care programs should provide funds only, and not direct services.
9. Funds for such programs may come from general tax revenues and not from social security taxes.

In a related action, urging that government seek the advice of the medical profession on health legislation, the House adopted a resolution which included the following statements:

"This House of Delegates restates its offer to meet with the President of the United States through our Legislative Task Force to discuss proposed medical care legislation with a view to safeguarding the continued provision of the highest quality and availability of medical care to the people of the United States.

The House of Delegates of the American Medical Association instructs the Board of Trustees of the American Medical Association to embark immediately on an active campaign to inform the membership of the American Medical Association of the grave considerations in adhering to our principles of ethics posed by legislation now pending before Congress.

The American Medical Association strongly urges those branches of the government interested in the formation, the enactment, and the implementation of laws which deal with the provision of professional medical services to the public to seek and utilize the advice and assistance of the physicians who will render such services. Such advice and assistance should be received through

our chosen representatives, the officers of the American Medical Association.

The American Medical Association intensifies its efforts to modify all such pertinent legislation, employing the necessary means and appropriate actions to the end that the health of the public and the pursuit of excellence in medicine be unimpaired by such legislation.

The American Medical Association makes every effort to continue, and where necessary expand its communication activities so that all physicians as members of component medical societies will be properly, continuously, and completely informed of developments in this critical area during the coming months."

Another item of business which came before the House of Delegates which drew considerable attention was the DeBakey Commission Report also known as, "The President's Commission on Heart Disease, Cancer, and Stroke."

This Commission in December, 1964, published a comprehensive report including specific recommendations for the establishment of a national network of regional heart disease, cancer and stroke centers for clinical investigation, teaching and patient care in universities, hospitals and research centers, and other institutions.

The Commission specifically recommended 25 such centers for heart disease, 20 for cancer, and 15 for stroke to be established over a five year period in conjunction with major existing medical institutions, plus an additional number of diagnostic and treatment stations to the number of 150 for heart disease, 200 for cancer, and 100 for stroke, plus another 100 for rehabilitation.

This Commission also recommended additional programs including increased grant support of medical complexes, increased funds to the Public Health Service for establishment and maintenance of coordinated statewide laboratory facilities, the establishment of 25 biomedical research institutes, an increased number of fellowships and investigatorships in clinical fields, increased



funds to the Veterans Administration and public health hospital systems for training, research, and patient care.

The Commission further recommended legislative changes in the Public Health Services Act by November 1, 1965, and new legislation regarding reorganization of federal programs as well as funding of federal programs.

Realizing that many practicing physicians at present are not aware of these proposals which will affect many phases of medical care in the United States, I felt that I should give some of the background in discussing this report.

There were seven resolutions from the various states involving the report and recommendations of the President's Commission on Heart Disease, Cancer, and Stroke. The House adopted a substitute statement which resolved that:

"The American Medical Association point with pride to the immense strides made in the approaches to the conquest of heart disease, cancer, and stroke under existing patterns of research and medical practice; strongly favoring the use of financial support for extension of these patterns rather than replacement by a complex of medical control center and satellites."

"The American Medical Association oppose those particular Commission recommendations which call for and have stimulated proposals for hastily contrived and unproven sweeping changes in the pattern of medical research, education, and patient care."

"The component state medical associations be urged to conduct conferences with medical educators and scientists, medical staffs of hospitals, medical society representatives, and other interested parties, for the purpose of exchanging information and for development of such recommendations as may be appropriate for the continued improvement of medical education, research and patient care."

"The state medical associations be

urged to report findings and recommendations resulting from these conferences to the AMA Board of Trustees, for the information of the Board, its Councils, and the Association Members."

Action on the Gunderson Committee Report reviewing the size, make-up, and functions of the House of Delegates was postponed until the 1965 Clinical Convention in Philadelphia.

In a brief report to the Board of Trustees, the Council on Post-Graduate Programs affirms its belief that the establishment of a new section is an important change in the AMA structure, and submitted a procedure for evaluating the qualifications for a new section and the scientific programs of all sections.

The House approved the recommendation, with certain word changes, and suggested that it be sent first to the Gunderson Committee, and then to the appropriate AMA Council for consideration.

The miscellaneous actions of the House of Delegates considered the various resolutions and numerous reports from councils, committees, and the Board of Trustees.

It urged medical schools and agencies concerned with continuing education to incorporate appropriate learning experiences for physicians in counseling relating to sexual attitudes and behavior.

It agreed that hospital medical staffs and state and component medical societies be urged to encourage the establishment, maintenance, and proper use of cancer registries in hospitals, but that the establishment of such registries should not be made a requirement for accreditation by the Joint Commission on Accreditation of Hospitals.

It instructed the Council on Medical Service and its committee on Federal Medical Services to remain alert to any deviations from policies of the Veterans Administration concerning the provision of drugs to veterans treated by private physicians, and to meet with pharmacy representatives so that the basic principle of freedom of choice of pharmacists be maintained.

It referred to the Board of Trustees a resolution calling for the AMA to caution the public against discontinuing voluntary health insurance policies and prepayment plans for persons over 65 in "anticipation of pending legislation."

It reaffirmed its policy concerning the practice of radiology, pathology, anesthesiology, and physical medicine in hospitals.

It reaffirmed AMA policy that human blood, as living tissue, should not be purchased under insurance contracts. It was recognized that exceptions may be necessary when there is need for unusually large numbers of transfusions, or whenever volunteer blood donors are not available.

It urged state and local medical societies to encourage the development of the Explorer Scout Program for Medical Specialty Posts and noted that about 150 of the 21,000 Explorer Scout Posts in the country are directly related to health.

It adopted a resolution calling for the continued efforts to secure the passage of legislation which will remove tax discrimination against professional people, specifically HR 10 (Keogh) and HR 697 (Wellner), but turned down recommendations that the AMA encourage its members to proceed at the state and county levels with the formation of corporations for the purpose of implementing an organized effort in the courts to remove tax discrimination.

It directed the Board to study the opportunities and problems associated with Operation Head Start and other programs now operating or planned under the Economic Opportunity Act.

It referred to the Board for study a resolution calling for "a program of purchase of health insurance in every state, subsidy for which shall be by federal state participation; under which extension of coverage shall be to all needy persons regardless of age."

It also referred to the Board for consideration an appropriate action, a ten point legislative program outlined by the Minnesota Delegation.

It disapproved a series of resolutions urg-

ing the approval of an American Board of Family Practice, since such action would be in violation of established procedure for creation of new specialty boards.

It urged the Council on Medical Education to establish a standard date of appointment for all approved residency training programs.

Encouraged state and county medical societies to participate in the formation of State Associations of the Professions, to provide a vehicle, for interprofessional co-operation in those areas where united activity of the various professions can be of great benefit.

Amended the by-laws to provide that the vice-president shall succeed to the presidency should the president, die, resign, or be removed from office.

Accepted a Board of Trustees report stating that it had referred to the joint AMA-American Bar Association Committee, a previously introduced resolution designed to present a grievance against alleged abuse of legal processes, characterized in the resolution as "vexatious litigation."

In the election of officers Dr. Charles L. Hardson of Cleveland, Ohio, a member of the Board of Trustees since 1961, was named President-Elect.

Dr. Andrew Bunten of Cheyenne, was elected as the Association's Vice-President. Dr. Bunten is a former Nebraskan and graduated from the University of Nebraska College of Medicine.

Dr. Milford O. Rouse of Dallas, Texas, was re-elected Speaker of the House of Delegates, and Dr. Walter Bornemeier of Chicago was re-elected Vice-Speaker.

Dr. Irvin E. Hendryson of Denver, Colorado, was elected to fill the unexpired term of Dr. Hudson on the Board of Trustees.

Elected to the Council on Medical Education were Dr. Bland W. Cannon of Memphis, Tennessee; Dr. William R. Willard of Lexington, Kentucky, and Dr. Earle M. Chapman of Boston, Massachusetts.

Named to the Council on Medical Service

were Dr. C. A. Hoffman of Huntington, West Virginia, and Dr. Russell B. Roth of Erie, Pennsylvania.

Dr. George D. Johnson, a member of the Council on Constitution and By-Laws, was also re-elected unanimously.

Dr. James H. Berge of Seattle, Washington was named to succeed himself on the Judicial Council.

In discussing with Dr. John R. Schenken, your other delegate to the AMA, we felt it would be wise to inform all members of the Nebraska State Medical Association and the American Medical Association that it is their duty and privilege to go before all reference committees both in our State Association and in the AMA and to discuss matters of interest to them.

I am sure that your delegates to the AMA, Dr. John R. Schenken and myself, welcome any suggestion you might have and it is our desire to carry out any instructions you may give us on a national level.

Again, I want to thank the Nebraska State Medical Association for asking me to represent them in the House of Delegates in the AMA and assure you that I am your humble servant.

E. F. Leininger, MD  
Nebraska Delegate.

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## Current Comment

### Hypnosis — What Is Its Proper Place In Medicine?—

In the July, 1965 issue of *The New Physician*, Dr. Edward Podolsky, a Brooklyn, New York psychiatrist, tells of the successful use of hypnosis in such varied instances as:

1. relieving the anxiety and pain associated with terminal cancer
2. "locking" the position of a patient's forearm against his abdomen during the three weeks that it took for a skin graft to "take"
3. helping overweight patients reduce

4. treating infertility, with reference especially to those patients with "spasm of the tubes, vaginismus, premature ejaculation, habitual abortions"
5. temporarily improving vision from 20/50 to 20/20
6. treating warts
7. providing "instant emotion" for research studies on stress and fat mobilization.

Dr. Podolsky stated that hypnosis is "now established as a science."

Commenting on the above article, Dr. C. H. Thigpen, the editorial consultant in psychiatry for the above journal, and a practicing psychiatrist in Augusta, Georgia who is a member of the faculty of the Medical College of Georgia, presents a less enthusiastic view. He states that only 5 to 10 per cent on whom hypnosis might be used could expect to obtain remarkable effectiveness.

### American Doctors in Vietnam—

A joint effort of the Agency for International Development (AID) and a new voluntary organization called "Project Vietnam" will bring about an increase in the number of American physicians in Vietnamese provinces. Project Vietnam is administered by the People-to-People Health Foundation, Inc., Washington, D.C., and will provide transportation and a monthly subsistence allowance for each physician. The number of AID doctors in Vietnam will be increased to 35. Seven other countries send physicians to Vietnam, where they serve Vietnam civilians. For information, write to Project Vietnam, 2233 Wisconsin Avenue, N.W., Washington, D.C. 20007. The program was created as a result of the President's request for increased American medical aid for Vietnam. This is surely a worthwhile cause and we admire those who participate in it. In the meantime, we are criticized because there are groups and areas in the U.S. where, our critics say, medical care should be augmented.



## PRESIDENT'S PAGE

Many Nebraska physicians find their energies divided between the disciplines of their profession and the nightmare of politics. The talents of our political hecklers repeatedly draw out our amateurish efforts. Some are quite disturbed about the subservient, hat in hand, attitude of some of our friends and contemporaries have toward the tremendous federal power centered in Washington today. I dare say that the majority of practicing physicians in Nebraska resent a typical ill-founded L.B.J. utterance "no longer will older Americans be denied the healing miracles of modern medicine" as he was signing the Medicare Bill in Independence, Missouri early in August. Such statements belittle the private competent American physician, on call seven days and nights a week, taking care of the sick population. This comment could have been coined by Wilbur J. Cohen and his eighty-four thousand plus contemporaries in H.E.W. Mr. Cohen is a drafter of the original Social Security Act and the author of the present plan to nationalize American Medicine. Here is a typical example of the type of criticism that in the past and the recent past, has undermined the traditional system of medical practice in this country. This is the type of ill-founded charge that has placed the practicing physician on the defensive.

Before Medicare became a law of the land and anyone had the faintest idea of what the rules, regulations, customs, and directives would be to assure Americans the deletion of the alleged mistreatment and neglect in the past, a new Act passed the Senate June 29th, 1965. This is an Act to amend the Public Health Service Act to assist in combating Heart Disease, Cancer, Stroke, and *other major diseases*. As of now, this is in the House of Representatives, Reference Committee on Interstate and Foreign Commerce. The Act, S 596, a hastily contrived piece of legislation, is outlined on twelve pages, double-spaced. It requires a Part 1 and a Part 2 in book form, that is about the thickness of a Chicago telephone directory to attempt to explain the Act. When the Act was referred to the Committee on Interstate and

Foreign Commerce it had been endorsed by the American Heart Association, the American Cancer Association, the American Hospital Association, and the American Public Health Association. I know nothing about the American Public Health Association of Nebraska but I do know many of the Nebraska members of the other organizations. I do not know a single member of the Nebraska Heart Association, Nebraska Cancer Association, or the Nebraska Hospital Association, who could appear before a lay or professional group and explain how this legislation would contribute importantly in advancing medical education, medical research, or health care of the American people in this area or any other area. The comment "Medical Cartels" by one of our outstanding physicians and educators in this State summarizes the whole plan.

How are we going to combat these basically deviated groups that are trying to centralize the power over American Medicine in Washington? We have just about caught up with Bismarck's Prussia. How can we show the citizens that today's greatest contribution to American Medicine and the care of its citizens is in the general hospital? Why have we failed to achieve success in the fight against a principle of a medical program built upon Social Security basis? There have been many suggestions as to how we should cope with our present and impending problems. No one can deny that the most single important step is an educational problem to show the average citizen and Legislature that our concept of medical research, education, and present care should not be radically altered. One of the best ways to do this is to speak with one voice. This voice could be NEBPAC. This State PAC is being organized under the leadership of Dr. Max Raines of North Platte. It will consist of three groups representing three Nebraska Congressional Districts. Let us help this group to hack through the mass of apathy among physicians and help them open our eyes to the realities of the legislative process. In this way we can maintain the best in American medicine.

# A Multidisciplinary Approach To Genetic Counseling\*

**A** Genetic Counseling Service has been functioning as part of the Mental Retardation Evaluation Clinic at the Nebraska Psychiatric Institute since July, 1964. The service is one of approximately 30 in the country which offer genetic counseling and is the only one of its kind currently available in the state of Nebraska.

The Genetic Counseling Service functions as an integral part of a medically oriented team which makes up the Children's Division within the Nebraska Psychiatric Institute and the Department of Neurology and Psychiatry of the University of Nebraska College of Medicine. The cytogenetic laboratory operates in conjunction with the existing cytogenetic research facilities, and is under the immediate direction and supervision of a highly qualified human cytogeneticist. Counseling services are carried out in collaboration with a team consisting of a cytogeneticist, child psychiatrists, psychiatric social workers, a pediatrician, clinical psychologists, speech and hearing specialists, and a public health nurse.

The integrated efforts of this large team insure that the parents receive accurate and authoritative information concerning the possible presence of chromosomal or genic abnormalities in themselves and their offspring and an assessment of the genetic risk for recurrence in future offspring. Equally important, however, is the availability of sensitive, medically supervised counseling which takes into consideration the crisis nature of the situation.

## Description of the Service

The service is available on referral by physicians to all residents of the state of Nebraska and, to a limited extent, to those in surrounding states. Currently, the service is performed without fee, although some minor modification in this policy may be indicated in the future. Cases are accepted

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for chromosomal analysis and counseling on the basis of suspected or known genetic defects for evaluation and interpretation of genetic risks. Genetic defects may be either genic, involving recessive or dominant traits, or chromosomal in nature.

The subsequent evaluation and disposition of the case involves the following steps:

1. Social and developmental history taken by a specially trained psychiatric social worker with experience in mental retardation and birth defects.
2. Medical and pregnancy history with special attention to potential stress factors such as radiation, drugs and infections.
3. Pedigree analysis.
4. Additional clinical evaluations may be indicated especially involving the consultative services of a pediatric neurologist, pediatricians with specialized experience in mental retardation, speech and hearing pathologists, clinical psychologists and other behavioral scientists.
5. Chromosome analysis, where indicated.
6. One or more interpretation interviews with the parents upon completion of

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the above studies and integration of the findings.

The manner in which the interpretation interviews are carried out is tailor-made to each case. Prior to the interpretation interviews, it is decided which members of the team may be required to participate by the nature of the special problems presented by the child and the particular concerns and anxiety of the parents. The genetic defect, if present, is viewed as a major contingency in the child's developmental process and the subsequent counseling is designed to provide not only adequate information on which the parents can base future judgments concerning the care of the child and planning for future conceptions, but also an emotionally supportive experience which will help parents through a stressful period. Conceptual distortions entering into the parents' image of the child's status and needs are sought out in the counseling interviews and an effort is made to correct these so that there is a minimum of interference with caring for the child as a real person with an individual identity.

Interpretation interviews which are seen

as experiences in which information alone can be imparted to parents may miss the entire value of the service. We have noted major degrees of upset and concern in parents in relation to relatively minor difficulties, and vice-versa. We have also learned that the degree of upset and disorganization which may have been induced in the parental care by the appearance of some real or imagined defect in the child may be as major an adverse influence on the child's subsequent development as any inborn defect may prove to be. In most instances there seems to be little direct relationship between the actual severity of the defect and the degree of emotional disorganization or concern which may appear in the parents.

### Conclusion

It would appear then, that the desirable model for genetic counseling service is one which combines the most advanced laboratory services in chromosome analysis with a broad spectrum of medical and allied specialists who are available on a consistent basis for consultative evaluation of the child and family, and for professional support in the dynamic aspects of family counseling.

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"The Clinic has demonstrated that there is a real and vital place for the clergyman in the treatment of sickness — a question which has troubled many minds . . ." (Cowles, Edward S., MD: Religion and Medicine in the Church, page 73, The Macmillan Company, New York, 1925).



# Tracheostomy:

## INDICATIONS AND TECHNIQUES

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**T**RACHEOSTOMY may well be one of the oldest of surgical procedures to sustain life under emergency conditions. It probably antedates medical writing; at least there is a description of it as early as 124 B.C. However ancient in concept and execution, the modern surgeon still may experience difficulties, because the operation was improperly timed, because of technical misadventures with the surgery itself, or because the fundamentals of aftercare were ignored.

It is important to remember that throughout the centuries of its use, tracheostomy was employed primarily because of obstruction of the *upper* airway. Actually, the ever widening indications for tracheostomy as we know them today involving lower airway secretion problems and respiratory insufficiency have been utilized only during the past 15 to 20 years.

Recently Dugan and Samson<sup>1</sup> reported on 461 tracheostomies performed in local hospitals over a five year period. In this group, only 82 were performed because of laryngeal edema or other upper airway obstruction. Studies such as this and others, give a good evaluation of the present trend in indications.

A review of our figures gave concern, however, because of the high overall mortality rate (48 per cent). As far as could be determined, this was primarily due to the seriousness of the underlying disease process rather than to the operation itself; however, five of the 461 patients (1.1 per cent) died from complications of the operation or the postoperative care. Such a high mortality rate must be scrutinized with care. While the indications did not seem unreasonable, the impression was gained that on a number of occasions, the operation was performed too late, as a last-ditch or emergency procedure.

It is our firm belief that careful study of the patient involved will indicate the necessity for tracheostomy so that it can be done in the operating room as an unhurried, elective procedure rather than as an emergency midnight tracheostomy on the ward with poor lighting, inadequate help, and less than ideal anesthesia. This can truly be a perilous adventure for all concerned, including the patient. In general, the mere observation that tracheostomy may be indicated probably means the operation should be planned in the immediate future.

### Indications

Whether performed concomitant with or following major surgery, following trauma, or on strictly "medical" patients, the indications for tracheostomy may be summarized as follows. Obviously, there will be some overlap in these various categories on individual patients.

1. *The efficient removal of excess tracheobronchial secretions.* This is one of the most frequent indications for tracheostomy. Excess secretions may be present in many situations: postoperative, postpneumonic, posttraumatic. The persistence of excess secretions in spite of tracheobronchial catheter aspiration, bronchoscopy or both, is sufficient reason for immediate tracheostomy. The patient suffers a constant harrassing wet cough, productive of only small amounts of secretion. Rales and rhonchi will persist (wet lung syndrome). These patients may be dsypneic and often exhibit manic restlessness from anoxia. At times, ill-advised opiates are given because the restlessness is attributed to pain. This only compounds an already serious situation.

2. *Trauma.* It has only been since 1949 that tracheostomy has been considered in a number of situations dealing with trauma.

Even during World War II, the only advance beyond laryngeal obstruction was the occasional use of tracheostomy for injuries of the trachea or major bronchi. Tracheostomy is now employed almost routinely in combined chest and head injuries with unconsciousness; maxillofacial injuries, burns of the airway, blast lung, and purely thoracic injuries with uncontrolled traumatic wet lung.

Tracheostomy may likewise be of special importance in stabilization when flail chest has resulted from fractures of ribs, sternum, or both. When external stabilization is unsuccessful because of the extent of injury, tracheostomy is used with a mechanical respirator. In general, cuffed tracheostomy tubes must be used. If the thoracic compliance requires pressures of less than 35 centimeters of water, the Bird or Bennett type of respirator is adequate. If pressures of greater than 35 centimeters of water are necessary for adequate respiration, a piston type of respirator (Morch, Engstrom) is necessary.

In lower airway injuries, or extensive lower airway surgery, tracheostomy takes pressure off the suture line.

3. *The need for reduction of dead space.* When the upper air passages are bypassed by tracheostomy, it has been estimated that the respiratory dead space will be decreased by approximately one ml per pound of body weight. This reduction may mean the difference between life and death when the tidal volume has become seriously impaired. Patients with severe emphysema, or pulmonary fibrosis may be greatly benefited by reduction of dead space. This may be combined with a secretion problem, or may result from limited respirations following surgery or trauma.

Likewise, patients with shallow respirations from a variety of causes may be benefited by a reduction in air space. (a) prolonged unconsciousness due to any cause (postoperative, head injury, cerebral vascular accidents, barbiturate poisoning); (b) respiratory paresis (bulbar poliomyelitis, cervical cord injury, curarization therapy in tetanus). If the reduction in dead

space or the removal of excess secretions still does not give adequate respiratory exchange, positive pressure breathing may be instituted via the tracheostomy.

4. *Problems primarily concerning the lungs.* In situations where there is poor gas transport across the alveolar capillary membrane resulting in hypercapnia, hypoxia, and either acute or chronic respiratory acidosis, tracheostomy may be life-saving. Examples include extensive pulmonary emphysema, cardiac problems post-operatively, pneumonectomy in patients with poor respiratory reserve and severe pulmonary edema either from an excess of intravenous fluids, or prolonged cardiac surgery (particularly with pulmonary hypertension).

5. *Obstructed upper airway.* Until approximately 1950 this was the classical and practically only indication for tracheostomy. This category includes a wide variety of conditions such as laryngotracheobronchitis in infants and small children; certain categories of major neck surgery; bilateral recurrent nerve paralysis; problems associated with the aspiration removal of foreign bodies; acute abscess involving the pharynx or upper mediastinum; and various types of regional carcinomas.

### Instrumentarium

There are a great number of tracheal cannulae available today. In general, we prefer to use sterling silver tubes with a relatively unobstructed surface such as the C. L. Jackson model. There are also varying angles between the tube and the neck plate. The number and size of tubes which should be on hand depends on the type of hospital involved. Certainly, if there are an emergency department and intensive care unit, sets of tubes from 00 to 6 should be available in these areas as well as in the operating room.

In a children's hospital, we have preferred the 65 degree angle of the Holinger model in the relatively shorter lengths of 33 and 40 millimeters. In general, this seems to be a better angle for children than the usual angle of 90 degrees. The latter



seems better suited to the adult sized tubes: Nos. 5, 6, and 7. Ordinarily, we do not attempt to insert the largest tube which will fit into the trachea since it is important both in children and in adults to maintain the ability to phonate and to maintain passage of air through the larynx.

When positive-pressure breathing is undertaken via a tracheostomy, in an adult, the tubes must be cuffed. In children, however, it seems better to use a larger sized tube without a cuff.

Cuffs and various sizes of adaptors can be purchased and should of course, be available.

### Operative Technique

It should be emphasized again that an orderly elective tracheostomy is to be preferred over a hurried emergency operation. There is convincing proof that both complication rates and death rates from the tracheostomy itself are appreciably increased under emergency conditions.

The patient is placed supine on the operating table. The neck is moderately extended by means of a flattened roll under the shoulders and the chin is kept pointed towards the ceiling and in the midline. Frequently, preoperative bronchoscopy will be advisable and the bronchoscope can then be left in place for oxygen administration and to act as a stent for the trachea.

Either local infiltration or general anesthesia can be used. We have no hesitancy in inducing general anesthesia and inserting an endotracheal tube which likewise serves to immobilize the trachea.

It is probable that when a true emergency exists, a vertical incision is safer, since there is less bleeding and perhaps better delineation of structures. Ordinarily, however, we prefer a three centimeter horizontal incision placed approximately two centimeters above the suprasternal notch. The muscles are separated in the midline and the pretracheal fascia is then incised vertically with just sufficient dissection at the anterolateral edges of the trachea so that small retractors can aid in holding the trachea securely. Usually, the thyroid isthmus can be re-

tracted upward, but it can also be divided if necessary. With the trachea exposed and steadied, vertical incision is made in the midline through the second, third, and perhaps fourth rings. Under no circumstance should the first ring or the cricoid cartilage be incised. Occasionally, we place mattress sutures through each side of the trachea parallel to the incision. This greatly aids in reinsertion of the tube in the immediate postoperative period should this become necessary.

A number of other incisions in the trachea have been described: The T-incision, the U-incision and the button incision. Such incisions are not necessary. They take extra time and occasionally they result in an off center insertion of the cannula.

The tracheal incision is spread by forceps or a Trousseau dilator and the appropriate tube with obturator in place is slipped into the trachea. For the insertion of a cuffed tube, a little longer tracheal incision is necessary.

Careful check of the tube position must now be made. If the tube is fitting correctly, the neck plate will remain flush with the neck without pressure. The aspirating tip can easily pass without obstruction. The patient will be breathing freely and without stridor or cough. If these criteria are not all met, it means that the tube either is not fitting properly, or that a false passage has been made into the mediastinum.

No deep sutures are used to close the dead-space. One or two sutures in the skin and subcutaneous tissues are all that is necessary. If the patient is restless, the tube may be made more secure by actually suturing it to the skin rather than depending on the usual tape.

### Postoperative Care

Meticulous postoperative care will eliminate nearly all complications during this critical period.

1. *Humidification.* In contrast to the air which is moistened by passage through the nares, air or oxygen taken directly into the tracheostomy tube is far too dry and a



continuous moist atmosphere is necessary for a number of days.

The mere bubbling of oxygen or air through the ordinary humidifier does not moisten it sufficiently and some type of nebulization is mandatory. Materials are usually available at any hospital and consist of sterile normal saline or distilled water which is dropped intermittently into a nebulizer with oxygen being used for pressure. The blow-off metal T cylinder with an accordion rubber tubing (such as can be found in the Anesthesia Department) is attached to the tracheostomy connector.

Likewise, a small plastic collar can be attached by corrugated tubing to the nebulizer and worn over the tracheostomy opening. A few cc of normal saline can also be instilled into the trachea just before aspiration.

Infants and small children are placed in some type of mistogen tent. The various wetting agents have not been used routinely.

On a busy emergency or intensive care unit, integrated commercial equipment can be purchased and is to be preferred.

Oxygen must be administered under carefully supervised conditions. If the patient is still dyspneic even though pink, it may mean that he has respiratory acidosis, and a positive pressure respirator and cuffed tube may then become necessary.

2. *Radiologic confirmation.* Particularly in children, a PA and a lateral view of the neck and upper chest should be taken within hours of a tracheostomy. One must make certain that the size, angle, and length of the tube are correct.

3. *Aspiration of secretions.* This constitutes one of the most important aspects of postoperative care. The materials required are a whistle tip catheter with a Y-tube connection of a size to fit easily through the cannula, and a high vacuum pump delivering suction of some 200 to 250 cc of water. In a number of centers, asepsis is demanded in handling the catheter. At the least, cleanliness (clean gown —

washed hands) is necessary. Between aspirations, the catheter should be kept in an aqueous antiseptic solution and both catheter and fluid should be changed every 12 hours. The tracheal catheter should not be used for pharyngeal aspiration.

When secretions are excessive, suction may be necessary every ten to 15 minutes. The inner tube should be removed, cleaned, and rinsed with each aspiration.

Tracheobronchial toilet must be meticulous. The catheter is passed through the cannula to its fullest extent (approximately 15 centimeters) with the Y-tube open (no suction). The Y-tube is then intermittently closed with the finger and the catheter slowly rotated as it is withdrawn. Full suction should not exceed from five to ten seconds. The maneuver should be repeated as long as secretions are obtained. Each stem bronchus may be entered by turning the head sharply to the opposite side and elevating the chin. Particularly when comatose, the patient should be turned from side to side as a modified postural drainage. This will prevent the pooling of secretions in the dependent bronchi.

The patient may continue to be dyspneic or to wheeze following aspiration. This suggests the presence of crusts or plugs. Bronchoscopy may then be advisable for their removal either through the larynx, or through the tracheostomy stoma.

4. *Changing the tracheal cannulae.* It is not necessary to change a well fitting tracheal cannula for several days. However, the lumen may become sticky, with difficulty in inserting the inner cannula. The tube then must be changed. This usually occurs when the inner tube has not been immediately replaced after cleaning.

If the outer cannula must be changed within 24 to 48 hours, great care must be used to be certain that the cannula is, in fact, replaced within the trachea. After several days, however, there is no problem because of the formation of a sinus. When a cuffed tracheal cannula is employed, the main danger is pressure ulceration or necrosis of the tracheal wall. The cuff must be de-

flated at least several minutes every two hours to prevent this complication.

5. *Decannulation.* There is usually no problem with decannulation in the adult. When the need for tracheostomy has passed, the tube is corked. When this is easily tolerated for 48 hours, the cannula is removed.

In infants and children, smaller sized tubes are inserted on succeeding days and the smallest tube is then corked. When this is tolerated for some 48 hours, the tube is removed.

In general, the sinus closes in from 24 to 72 hours. A dry dressing over the sinus with a small wick of vaseline is all that is necessary.

If the tube has been in place for a prolonged period, the sinus may epithialize and it may be necessary to excise it. The strap muscles may be immobilized and sutured over the tracheal opening.

## Complications

Complications either during operation or in the postoperative period have been reported to be as high as 33 per cent in some series. There is an appreciable mortality from these complications. The most frequent *operative* complications have been hemorrhage, mediastinal emphysema, and pneumothorax, false passage of tracheal cannula into the mediastinum and damage to the cricoid cartilage. The most frequently noted *postoperative* complications have included ulceration and granuloma, plugs and crusts, dislodgement of the cannula, and tracheal stenosis.

In the main, these complications are preventable. They can all but be eliminated by an early decision to operate, meticulous and deliberate surgery in an ideal milieu, and strict adherence to the principles of postoperative care.

## Reference

1. Dugan, D. J., and Samson, P. C.: Tracheostomy. *Amer J Surg* 106:290, 1963.

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The nation's two million epilepsy victims have better work safety records than almost any other group. The Epilepsy Foundation fights for greater employment opportunities for persons with epilepsy. Write to: The Epilepsy Foundation, Washington, D.C. 20005.

# Who, What, Where, When and Why?\*

**O**MAHA recently has been the scene of a large celebration, marking the fiftieth anniversary of the Retailers. During their Jubilee, the Retailers reviewed many interesting facts about the history of the Mid-west and the Mid-westerner as these were related to the history of retailing. What has happened to the "Who" in retailing is so similar to what has happened to the "Who" in medical practice that a comparative summary presents some valuable food for thought.

## The Small Store Owner

At the beginning of the twentieth century, the retailer was the small-store owner, the main retail sales outlet. He, with his wife and family, owned and operated the small general store in a small country town, rural area or community. The store was often referred to as a family store and this retailer knew each of his customers well enough to make each person feel at home in his shop. He did not store vast amounts of merchandise, but adjusted his stock to meet the needs of his customer; his sales were small and his service was dependable. The relationship between the retailer and his customer was a friendly, pleasant, personal one.

## The Family Physician

Contemporary with the small-store owner and the general store was the old-time country doctor or the family physician, with his small office nearby. He was a general practitioner of medicine. To him, the first "Who" was his patient, a human being and a friend. He put service to his patient before any selfish interest, as he worked to treat illness and preserve health. He learned to know each patient personally, physically, mentally and emotionally. He would watch each patient carefully and showed a skill in the use of his physical senses which demonstrated his practice of medicine to be a true humanitarian art. He would wait at the bedside, when needed, to bring sympto-

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matic relief to a patient or comfort to a family. He realized that there were 24 hours in each day and seven days in each week. He would worry about each patient and worry, even more, as he recognized his own limitations and deficiencies. His wonder drugs may have been chosen from his own worn, pocket-size copy of "Useful Drugs" but were prescribed to meet the needs of a single patient. The mortar and pestle of the local druggist mixed these ingredients into an individual prescription. This was *true personal medical practice*. The image of this physician will never be forgotten and his likeness can not and must not disappear from the story of medicine. This "Who," the dedicated general practitioner is indispensable.

## Changes in Retailing

Changes in retailing methods began with the inception of the department store, about eighty years ago. The large mail-order houses appeared at about the same time, but their impact was not felt until the beginning of the twentieth century. The lure of lower price, through volume and mass production, brought the chain stores, cut-rate stores, self-service stores, discount stores and the present-day multiple, large shopping centers and specialty shops. Early in this program, there was the feeling that none of these new methods of selling could succeed, because they were, entirely, too impersonal. Actual resentment was shown by large public bonfires in which piles of mail-order catalogs were burned. The small-store owner found that he could not compete with the new trend, when his customers, attracted by the lower price and the tremendous appeal of vast, imposing display, de-

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serted his store and became members of the large crowds at the warehouse stores. The individual personal touch was lost and the customer eventually became a number on a credit card. The "Who," represented by the small-store owner, has largely disappeared together with the "Who," represented by the customer, in the personal sense.

### **Changes in Medical Practice**

Although the beginnings of scientific medicine are traced in history to the middle of the nineteenth century, progress was slow and no great impact was felt until fifty or sixty years later. At the time of the First World War, preventive medicine, specific therapy, biological therapy and experimental, research-medicine received a tremendous impetus. It would be impossible to recount, here, all of the resultant knowledge-benefits. Suffice to say that the adage, "What is true today, was not necessarily true yesterday, nor need it be tomorrow," has become a familiar one.

The small store of knowledge of the "old-time" family physician was eventually to be confronted by the vast warehouse of modern, medical knowledge. True to his idealism, the general practitioner kept abreast with the new changes, as they occurred. He schooled himself to remember only such new facts as would enable him to treat, in a better manner, the whole patient.

At the same time, the large office building was followed by the large clinic, by the large medical center, and by an explosive growth in medical specialization. The patient was suddenly dissected among about fifty different specialists, associated with medical practice. In this particular trend, the patient as a whole, lost his identity, and became a case number but, he still is, and must remain the first and most important "Who" in the practice of medicine as an art. The individuality of the doctor is engulfed in a specialty, or submerged in a clinic, or both.

### **Advertising and Retailing**

Since 1914, advertising has become a highly important business inseparable from retailing. The multitudinous designs of the

clever advertising specialist converts the whims and fancies of the customer into needs and wants. Many new methods of approach to the customer and better means of communication with the potential customer became available and were used. Radio and television appeared and developed rapidly, and the leaden lips of the press began to use lip-stick. Fantastic displays and bags of gimmicks to attract attention drew herds of people to the shopping centers to take advantage of fabulous bargains. Sales matched promotional effort rather than customer needs.

### **Advertising and Medicine**

Advertising in medical practice is not ethical. The newer methods of dissemination of information, however, have brought medical practice a full measure of publicity. News media have been prompt to present to the world any available idea, fact, fancy, rumor or achievement, affecting medicine or the medical profession. The columnist or the medical reporter, without intended malice, tinges each story with the lure of the lurid and sensational. The education of the public by these methods has generally been considered to be superficial. The effect must be very great since it impels competitive producers of headache remedies, cold cures and many other self-medicaments, to sponsor coast to coast telecasts advertising these drugs. Who would ever have dreamed that a modification of the 5-3-1 prescription of the old-time doctor would ever become so famous, or so profitable?

### **The Medical Reporter**

The medical reporter or the medical technographer has found employment in the medical world. He or she is the ghost writer or collaborator in preparing medical manuscripts for publication, both lay and professional. This writer, trained as a news reporter and later specializing in medical informing, may produce material similar to that referred to above. A sentence, intended as a simile, may become a malignant statement and over-emphasis may defeat a benign purpose. For instance, the authors of Public Affairs Pamphlet No. 333 did not in-

tend to state that the observations, made by the early physician through the use of his five physical senses, were crude and inaccurate, yet, they allotted only five lines to the subtitle, "physician's role vital," in this 15-page effort to promote clinical pathology in a "new course to health." Emphasis might better have been placed on the fact that laboratory tests should be used to confirm the clinician's skill and diagnostic judgment. Tests should be ordered to correspond to the individual needs of each patient and each disease. When used in a "package deal" from which one card may be drawn to establish a numerical diagnosis, too much laboratory work is done and reliance is placed upon a "single number obtained at a single moment." If science engulfs the practice of medicine in this manner, automation with the slot-machine diagnosis will be the result. The whirling wheels of the electronic computer or mechanical brain can not replace the knowledge and judgment of the true, dedicated physician in directing personal medical prac-

tice — herd medicine versus individual medical practice.

### Summary

The "What," "Where," "When," and "Why" indicated in the title of this essay, respond to the constant and insistent changes which are consistent with the progress of the world and civilization. All philosophers are agreed that the one thing which resists change is human nature.

Medical research scientists have chosen their symbol, altering the Medical Caduceus by replacing the two serpents, entwined around the staff of life, with two inanimate cords. They have, thus, removed the symbolism of life, re-incarnation and immortality which, for centuries, has linked the practice of medicine with religion and idealism. The symbolism of the entwined serpents reviews the entire history of man — the afflicted and the healer, the patient and the physician, together throughout the ages. The first "Who," the patient — whose needs brought the physician.

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"For what is stolen by paternalistic government is that precious compound of initiative, independence, and self-respect that distinguishes a man from an automaton, a person from a number, and productive and competitive enterprise from a regimented people." (Ex-president Eisenhower as quoted in the Chicago Tribune, December 10, 1964).

# Reflections On The Treatment Of Multiple Myeloma With Special Emphasis On Melphalan

**M**ULTIPLE myeloma is usually considered to be a malignant, proliferative disorder of the plasma cell of unknown etiology. Historically this disease has been characterized by bone changes, protein abnormalities, and an excess of plasma cells of the malignant type. More recently a spectrum of disease has emerged through the use of more sophisticated analytical technics, usually referred to as the plasma cell "dyscrasias," consisting of a rather broad but interrelated group of syndromes which include protein abnormalities. Thus, the many and varied ways in which these disorders become manifest are a constant challenge to diagnostic acumen.

Though the sophistication in the identification of proteins and abnormal cells has advanced technically, an effective therapy for these disorders has yet to appear. However, there is now to be considered a variety of treatments partially to alleviate the suffering of these patients. In a few well recorded instances, a rather remarkable return to health has been described.

Once the diagnosis has been clearly established, one of the first problems is to decide whether or not a particular patient requires treatment. This dilemma seldom presented itself formerly, since the patients when the illness was recognized had multiple signs and symptoms of progressive disease. However, with the present greater use of bone marrow biopsy and serum electrophoresis, the disease is being unexpectedly discovered in completely asymptomatic patients. In an asymptomatic phase of the illness, patients may not develop complications for several years. Therefore, our current policy is not to treat these patients unless some complicating factor or sign of progression is present, such as pain, anemia, or progressive renal failure, since presently available treatment is strictly palliative.

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## General Treatment

The majority of patients present skeletal pain, most frequently back pain. In the case of localized pain or pathologic fractures (or both), splinting, plating, casting, and judicious localized radiotherapy are of considerable help. Whitelaw<sup>1</sup> has accumulated considerable data to show that severe pain in the apparent absence of pathologic fractures is very frequently (if not always) accompanied by hairline fractures demonstrable by careful radiologic technique. Perhaps the single most important long-term therapy for this aspect of the disease is a full-length back brace. The patient must be thoroughly indoctrinated as to the necessity of wearing such a brace at all times for the rest of his or her life, even when the other modes of therapy have rendered the patient virtually pain-free. During these later dangerous periods, the continued use of the brace should be most forcefully stressed. The natural tendency of the patient is to discard it, with the consequent development of compression fracture and paraplegia, an uncomfortably real possibility.

An ingenious recently studied mode of therapy for these patients was reported by Cohen and Gardner.<sup>2</sup> They attempted to induce skeletal fluorosis with osteosclerosis in 15 patients by the daily administration of fluoride and calcium lactate. Their present daily dose recommendation is 90 mg fluoride and 3 grams calcium lactate. In sev-



eral cases, subacute skeletal fluorosis was produced, although as yet insufficient data is present to determine whether this therapy is beneficial or not.

It cannot be emphasized too strongly that a most important aspect of the treatment of this disease is to keep the patient mobile and active. Since the pain is a result of bone destruction, any further augmentation in bone resorption, such as induced by prolonged immobilization, will lead to an even more accelerated course of the disease. Thus, our patients are mobilized as rapidly as possible following complications necessitating bed rest. If the period of immobilization appears to be unavoidably long, one could consider the use of a rocking bed to decrease bone resorption.

When one is confronted with a discouraged, anorectic, weak patient, androgen therapy has been of considerable value. Testosterone propionate, 100 mg three times a week; testosterone enanthate (Delatestryl), 600 mg I.M. once or twice a week; or fluoxymesterone (Halotestin), 10 mg three times a day has been recommended. This treatment leads to an increase in well being, often stimulates the appetite, and may alleviate anemias, as will be mentioned later. In the case of the male patient, there is no hesitation in using this therapy. However, with females, one must be more selective, since the masculinization and increase in libido accompanying its use may be intolerable to them. In such cases, the side effects of the regime are very carefully presented to the patient in order to avoid any misunderstandings.

### Chemotherapeutic Agents

#### A. Urethane:

Urethane was the first chemotherapeutic agent proven to have an effect in multiple myeloma,<sup>3,4</sup> and there is no question that spectacular remissions occasionally occur. However, the dosage necessary to achieve results cannot be tolerated by the majority of patients treated,<sup>5</sup> and the remissions produced are in general inferior to other presently therapeutic agents.<sup>6</sup> Indeed, the value of the agent has been seriously questioned by the Eastern Solid Tumor group.<sup>7</sup> They

found, in 83 patients randomly allocated to placebo or urethane (4 grams per day for 8 weeks or longer), no therapeutic advantage achieved by the 28 patients completing the urethane course over that of the controls.

#### B. Mustard Derivatives:

The three drugs commonly used are chlorambucil (Leukeran), cyclophosphamide (Cytosan), and melphalan (Alkeran), which appear to be of benefit in 30% or more of the cases. Recent evidence has accumulated on the use of cyclophosphamide and melphalan, and the discussion will be limited to these drugs.

##### 1. Cyclophosphamide.

This drug has been found to produce objective remission in myeloma in from 21-48% of the cases treated.<sup>8-12</sup> The objective signs of improvement include increase in hematocrit or weight or both, decrease in serum globulins, and a decrease in the percentage of marrow plasma cells. Only rarely has actual recalcification of bony lesions been documented.<sup>13</sup> Toxic side effects, besides the usual marrow depression, include alopecia and sterile hemorrhagic cystitis. Nausea and vomiting are generally mild. This drug uncommonly causes clinically significant thrombocytopenia<sup>13</sup> and, therefore, can be of great value in patients presenting initially with thrombocytopenia. The drug may be given I.V. and orally. Generally, the patient is given a loading dose I.V. of 4-8 mg/kilo for 6 days, and when the marrow toxicity has passed, the patient is begun on oral administration of 50 to 150 mg per day depending on the blood picture. Another mode of treatment is to administer 15 mg/kilo I.V. every week until the WBC reached 4000 per cubic mm; or the platelets, 100,000 per cubic mm. Following a return of the blood picture to normal, the I.V. injection of cyclophosphamide is given every 2-3 weeks and the dosage adjusted according to the blood count. This method is advantageous in clinical situations where many patients come long distances and would find it impossible to commute weekly for supervision of the oral dosage. We have treated six patients with this drug, only one of whom had not received prior treatments.

The five far advanced patients reported elsewhere<sup>13</sup> showed no objective regression. Three had a subjective response characterized by decrease in pain and increase in well being and strength, lasting four, six, and 14 weeks respectively. The other patient when initially hospitalized was experiencing intense generalized bone pain and was unable to walk. Following the administration of cyclophosphamide, he became pain-free, gained seven lbs., and was able to ambulate successfully. He has maintained this improvement for nine months with intravenous injections of the drug every other week. There has been no appreciable change in his anemia or abnormal globulin during this period.

2. Melphalan (Alkeran).

This drug became available to the general physician in early 1964 after extensive clinical trials in myeloma. Several workers including Osserman<sup>15, 16</sup> and Brooks *et al*<sup>17</sup> regard it as the drug of choice in myeloma. In conjunction with several other private practicing physicians in the Nebraska area, we have now treated 13 cases of multiple myeloma with melphalan.\*

These cases were typical representatives of the disease; their average age was 58 years. Every case had a positive bone marrow biopsy, and X-ray changes in their bones ranged from diffuse osteoporosis to multiple lytic lesions. Twelve of the 13 cases had abnormal protein peaks, eight of which were in the gamma and four in the beta globulin regions on serum electrophoresis. Four of the cases, in which Bence Jones protein in the urine was sought, were positive. Four of the patients were uremic at the time of diagnosis. Originally, the patients were treated with 0.2 mg/kilo per day until the development of toxicity as outlined by Bergsagel *et al*.<sup>18</sup> However, because of the relative severity of the toxic effects, the dosage was reduced to 0.1 mg/kilo or an average dose of 8 to 12 mg per day until the patient had received 60-80 mg, and then the drug dosage was reduced to 4 mg a day until the development of tox-

icity. The latter program has resulted in less severe side effects.

No maintenance dose of melphalan was given to the early treated cases, although our more recent cases are placed on such therapy when marrow toxicity clears, as recommended by Osserman.<sup>19</sup>

This tolerated dosage varies from 2 mg a day to 2 mg a week. The patients received a total average dose of 2.4 mg/kilo over a 30-day average period, the dosage being quite similar to that reported by Bergsagel *et al*.<sup>18</sup> Four of the 13 cases (31%) had an objective response for 9, 2, 3, 4, and 8 months (Table 1). The patient with the 9-month response had an outstanding result as follows:

*Case 1:* This 48-year-old, white female entered the hospital with severe pain necessitating total bed rest. Her initial hemoglobin was 8.6 grams per 100 ml, BUN 37, Bence Jones protein positive, serum protein 7.9 grams, with 3.7 grams of globulin. X rays revealed multiple lytic areas throughout the bones, and the bone marrow biopsy showed predominantly plasma cells. The patient received 324 mg of melphalan over a 31-day period. There was virtually complete relief of pain and restoration of fairly normal activity. Although the patient was hospitalized for pneumonia and a pathologic fracture, her hemoglobin rose to 12 grams per 100 ml, serum protein diminished to 6.3 grams per 100 ml

Table 1  
OBJECTIVE RESPONSE OF FOUR PATIENTS  
WITH MYELOMA TO MELPHALAN

| Case                                              | 1 | 2 | 3 | 4 |
|---------------------------------------------------|---|---|---|---|
| Decrease in pain -----                            | B | B | A | B |
| Increase in activity -----                        | B | B | B | A |
| Decrease in marrow<br>plasma cells -----          | B | A | A | ? |
| Increase in hemoglobin -----                      | B | O | B | A |
| Decrease in abnormal serum<br>proteins -----      | B | O | A | A |
| Increase in calcification of bone                 | A | O | O | O |
| Disappearance of Bence Jones<br>proteinuria ----- | B | B | - | - |

A = Partial decrease, or increase  
B = Complete return to normal  
O = No change

\*Reported in part at the American College of Physicians Sectional Meeting in Nebraska, 1964.



with 2.4 grams of globulin, and a repeat bone marrow biopsy was completely normal. Serial X rays showed only minimal recalcification. This improvement persisted as mentioned for nine months. A repeat course of drug, following reactivation of the disease, led to a lesser response for a two-month period.

*Case 2:* This 47-year-old, white female entered the hospital complaining of severe chest pain, weakness, lethargy, and nocturia. On physical examination, there was marked pallor, and the liver and spleen extended 4 cm below the right and left costal margins in the mid-clavicular line, respectively. Laboratory studies revealed a hemoglobin of 6.6 grams per 100 ml, WBC 13,300 per cubic mm, with as high as 29% plasma cells. The urinalysis results were one-plus albumin and Bence Jones protein positive. Serum electrophoresis revealed total serum protein of 8.1 grams per 100 ml with 3.6 grams of globulins including 23% beta per 100 ml and BUN 50 mg per 100 ml. Bone marrow was comprised of 90% plasma cells. The patient received 96 mg of melphalan over 12 days in addition to 100 mg of prednisone a day. Within 3 days of onset of therapy, lethargy and pain had virtually disappeared. In 1½ weeks, the liver and spleen were no longer palpable. During this period, the patient had a hemophilus influenza, pneumonia, and septicemia treated successfully with chloramphenicol (Chloromycetin). By the 16th day, after the start of melphalan, myeloma cells disappeared from the peripheral blood, and Bence Jones protein disappeared from the urine. A subsequent bone marrow examination revealed a decrease in plasma cells to approximately 15%, and serum electrophoresis revealed a decrease in beta globulins to 14%. Two and one-third months after the onset of improvement, relapse was documented by the onset of severe pain and recurrence of Bence Jones protein in the urine. This

remission, although excellent, was quite brief.

Two patients had subjective responses of 14+ months and 5+ months respectively consisting primarily of relief in pain, increase in well being and total activity. Thus, six of the 13 cases (46%) showed either an objective or subjective response. It is of interest that two patients showed a decrease in the abnormal globulin of greater than one gram, with no other evidence of improvement.

The side effects of the drug are quite impressive. Death occurred in one case. This patient was far advanced at the onset of therapy with marked uremia, anemia, leukopenia, and thrombocytopenia, the latter leading to periodic epistaxis. He died in uremic coma with continuous nasal bleeding. As his leukopenia and thrombocytopenia were more pronounced with the melphalan therapy, toxic manifestations must be considered, although it may well represent the natural termination of the disease. There were six complicating infections, including an H. influenza, pneumonia, and septicemia. Four of the cases required transfusions resulting in part from the marrow depressant effect of the drug. One patient experienced nausea, and two developed stomatitis. A decrease in hemoglobin of over two grams during the course of therapy was seen in five cases. All except one developed leukopenia and 10 of 12, a thrombocytopenia (Table 2). The magnitude and duration of marrow depression can be more readily appreciated in Table 3.

It is quite apparent that melphalan is useful in multiple myeloma. Objective regression rates vary from our 31% to a high of 71%.<sup>16, 17, 18, 20-22</sup> The present results are weighed by the fact that patients with hypercalcemia and uremia were treated, whereas Costa<sup>20</sup> excluded such cases from his series. Waldenstrom<sup>22</sup> does not consider azotemia as an absolute contraindication to therapy any longer, although he feels that renal insufficiency should be treated before melphalan therapy is instituted.

The side effects encountered were comparable to those of Costa<sup>20</sup> and Bergsagel *et al.*<sup>18</sup>



Table 2  
HEMATOLOGIC TOXICITY OF MELPHALAN

|                                                    | No. Cases | Pre-Treatment       | Treatment       |
|----------------------------------------------------|-----------|---------------------|-----------------|
| Hemoglobin (gms per 100 ml/8)-----                 | 5         | 10.6* (8.3 - 12.6)† | 6.7 (5.5 - 8.0) |
| White blood count (per cubic mm)-----              | 12        | 6250 (3000-13300)   | 2000 (275-3400) |
| Platelet count (10 <sup>3</sup> per cubic mm)----- | 10        | 237 (125-600)       | 48.2 (14-98)    |

\*—Average  
†—Range

Table 3  
HEMATOLOGIC TOXIC EFFECTS OF MELPHALAN

| Case    | Total Dose (mgs) | End of Therapy   |                       | Lowest count and days after stopping drug |                       | Persistence (days) of low count |           |
|---------|------------------|------------------|-----------------------|-------------------------------------------|-----------------------|---------------------------------|-----------|
|         |                  | WBC per cubic mm | Platelet per cubic mm | WBC per cubic mm                          | Platelet per cubic mm | WBC                             | Platelets |
| A ----- | 160              | 6600             | -----                 | 1800-21                                   | 40,000-19             | 9                               | ---       |
| B ----- | 114              | 3500             | 85,000                | 1700-13                                   | 14,000-21             | 94+                             | 70        |
| C ----- | 172              | 3900             | 149,000               | 275-14                                    | 23,000-7              | 29                              | 23        |

The former recorded one toxic death and five cases of prolonged marrow depression, and the latter noted a fall in hemoglobin of 2 gm in 22 of 38 courses of the drug, requiring transfusions in 23 patients, and seven infections including septicemias and five pneumonias. Using the modified drug dosage outlined previously, this toxicity has been markedly lessened or entirely avoided. Nevertheless, it is apparent that the hematologic toxicity of melphalan is difficult to predict and control since serious depression can develop and persist several weeks after treatment has been terminated. Our present policy is to treat new myeloma patients with melphalan, provided the WBC and platelets are adequate. If there is significant leukopenia or thrombocytopenia, we prefer cyclophosphamide since the marrow toxicity is more predictable. There is urgent need for a controlled comparative study of the therapeutic effectiveness of melphalan and cyclophosphamide. Whether melphalan is superior to cyclophosphamide, an opinion apparently held by some authors,<sup>16, 17</sup> remains to be scientifically proven.

## Hormones

### 1. Gluco-corticoids.

Steroids such as prednisone are useful in the treatment of hypercalcemia associated with myeloma. We employ a dose of 100 mg a day in divided dosages and simultaneously force fluids, encourage ambulation, or con-

sider the use of a rocking bed. If the patient is deficient in magnesium, the parenteral administration of magnesium salts appears to contribute to the alleviation of the hypercalcemia. The mechanism of action of steroids in hypercalcemia is still not completely clear, although recent evidence indicates that it increases bone absorption and reduces citrate release from bone marrow which probably plays a role in solubilization of bone salts.<sup>23</sup>

The well-known hazards of corticosteroids, particularly the increased susceptibility to infection, should be thoroughly considered before using them in multiple myeloma because of the already compromised defenses of the body.

Prednisone can be of distinct benefit in alleviating the hemolytic anemia associated with myeloma, especially if the Coombs' test is positive or the anemia is severe. It also may cause a decrease in globulin and an increase in well-being and appetite. However, we have not noted an improvement in the bone lesions or a decrease in the myeloma cells in the marrow. In conjunction with B. J. Kennedy, one of the authors (J.F.) has treated a number of cases with a combination of cortisone 25 mg t.i.d., urethane 0.3 gm t.i.d., and chlorambucil 2.0 mg t.i.d. The majority of these cases showed subjective improvement, although objective improvement was a very rare occurrence.

## 2. Testosterone.

As mentioned earlier, testosterone is useful in the treatment of the anemias associated with myeloma. Following the observation of B. J. Kennedy *et al*<sup>24, 25</sup> on the increased erythropoiesis of disseminated breast cancer patients treated with androgens, he and others have used these drugs in various other clinical diseases. Most recently, he has reported on the usefulness of these drugs in controlling the anemia of chronic lymphatic leukemia.<sup>26</sup> One of the authors (J.F.) has treated several cases of myeloma with androgens and has noted a lessening in the need for transfusions or a rise in hemoglobin. Surprisingly, at times, white blood counts have risen to levels higher than they had been in months, suggesting a more generalized effect of androgens on the marrow. Other workers have recently noted a similar effect on white cells.<sup>27, 28</sup>

### Summary

Multiple myeloma requires judicious selection of the various agents available for its treatment in the setting of overall patient care. A general discussion of therapy is presented and the benefits of the nitrogen mustard analogs (cyclophosphamide and melphalan), androgens, and corticosteroids are stressed.

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## NEUROLOGIC MANIFESTATIONS

# of Injury

ASSOCIATED with

## General Surgery

**S**URGICAL procedures, by their very nature, may provide direct and indirect alteration to neural structures. Possibilities are many and varied. New procedure brings forth new possibilities for complication. Some are reported then several times in a decade, to disappear as techniques improve. The remarkable fact is that neurologic complications of general surgery are not common.

Confronted with a neurologic syndrome following surgery, one must consider the following possibilities of origin:

Pre-existing or concomitant disease, unrelated to reason for surgery as, old nerve injury; subacute combined sclerosis).

Manifestation or complication of the disease for which surgery was done as, metastases of prostatic carcinoma).

A consequence of surgery, anesthesia or ancillary procedure, including postoperative state.

A new development in postoperative or convalescent period, unrelated to surgery or the disease for which surgery was done.

The preparation for surgery, the anesthesia, surgery itself, supportive and ancillary techniques during and following surgery and the postoperative state present the following possibilities for consideration when neurologic phenomena appear in the postoperative or convalescent period:

Hypotension (including various forms of shock; cardiac arrest; difficulties with extracorporeal circulation; complications of cardiac and aortic surgery).

Blood loss.

Hypoxia, CO<sub>2</sub> narcosis.

Direct trauma to neural structures.

Pressure, tension, incision, laceration.

Sutures, ligatures, retractors.

Positioning of anesthetized patient.

Hypothermia.

Scarring.

Toxicity as with spinal anesthesia.

Hydration, pH, electrolyte alterations.

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System failure, for example, hepatic, renal, adrenocortical, parathyroid.

Nutritional deficiency (especially vitamin B group).

Medication: prior and present. Alcohol use.

Neuroallergic reaction (for example, to penicillin or tetanus antitoxin).

Blood-transfusion complications.

Occlusion of arteries (carotid, vertebral, spinal radicular).

Embolism: systemic — air, fat, paradoxical; endocarditis.

Infection: particularly occult abscess, septicemia, endocarditis.

Rarely epidural or brain abscess, meningitis.

Tetanus.

Heatstroke.

Hysterical (conversion) syndromes.

Malingering and Munchausen syndromes.

### Hypotension, Blood Loss, Hypoxia

Surgery and anesthesia often impose the risks of hypotension, blood loss, and hypoxia, which the human organism appears to tolerate remarkably. Of neurologic concern is the tolerance of the human brain to these deprivations. Even the cerebral vascular systems of the elderly appear to withstand these transient deficits amazingly. The greatest incidence of cerebrovascular risk reported in surgery today occurs in cardiac surgery wherein the patient is subject to additional impositions, as extracorporeal circulation, cardiac standstill, occasionally hypothermia and embolism from several sources. Yet even here, the overall incidence of morbidity and mortality due to cerebral involvement is not great, a tribute to surgical teams.

Deliberate (for hemostasis) or inadvertent hypotension incurs greater risk in the patient undergoing surgery in head up position. Vasomotor reflexes maintaining an adequate cerebral blood flow may falter or fail under debility, medication, anesthesia and surgery. Insufficient blood flow of



more than a few minutes duration leads to ischemic infarction or thrombosis. Another risk appears in the patient anesthetized, even operated on, who is suddenly propped up. Prolonged unconsciousness and death have been recorded in such instances.<sup>1, 2</sup>

The incidence of serious or permanent cerebrovascular deficit postoperatively among the elderly is quite small. In 20-30% of these one may discern that the disability preceded anesthesia and surgery.<sup>3, 4</sup> Organic psychosis and cerebrovascular syndromes postoperatively in the elderly are often related to multiple factors including:<sup>4-10</sup>

- Hypotension, blood loss, hypoxia.
- Nutritional deficiency.
- Pulmonary insufficiency.
- Deterioration of condition for which surgery done.
- Alcoholism.
- Craniocerebral trauma.
- Immobilization.
- Senile neuronal degeneration.
- Torsion or hyperextension of neck.

The low incidence of permanent cerebral ischemic damage following surgery should not leave surgeons and anesthetists with a false sense of security. Neurologists would vote unanimously with them to hold hypotension, blood loss, and hypoxia minimal during and following surgery.

### Direct Trauma to Neural Structures

Trauma may occur:

1. At the operative site.
2. At a distance, due to:
  - positioning of patient
  - hypothermia
  - spinal anesthesia

### Operative Site Injury

The surgeon is aware of neural structures in or near his operative site. Occasionally, however, there appears an anomalous course of a nerve, anatomical relationships obscured by prior surgery, trauma or disease at the site, emergency, or error. A nerve may be injured by incision or excision, retractors, ligature or suture. Certain operative sites pose time-honored risks as the recurrent laryngeal nerve in thyroidectomy,<sup>11</sup> the seventh (VII) cranial nerve in otologic or parotid surgery.

Other neural injury at or near the site of surgery recently reported includes:

| INJURIES                                           | OPERATION                                                                                              |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Femoral nerve                                      | Vulvectomy<br>Herniorrhaphy <sup>12a</sup><br>Hysterectomy <sup>12, 13</sup>                           |
| Saphenous nerve                                    | Varicose veins <sup>12b</sup>                                                                          |
| Peroneal nerve                                     | Hip prosthesis <sup>12c</sup>                                                                          |
| Recurrent laryngeal, vagus nerve                   | Pulmonary (left thorax) <sup>14, 15</sup>                                                              |
| Spinal cord infarction                             | Thoracotomy<br>Thoracolumbar sympathectomy<br>Repair of coarctation or aneurism of aorta <sup>16</sup> |
| Twelfth (XII) cranial nerve, cervical sympathetics | Retropharyngeal abscess-drainage.<br>Tonsillectomy with endotracheal anesthesia <sup>13, 17</sup>      |
| Eleventh (XI) cranial nerve                        | Neck dissection <sup>13</sup>                                                                          |
| Posterior tibial nerve                             | Deep venous cutdown <sup>13</sup>                                                                      |
| Iliioinginal nerve                                 | Repeated herniorrhaphy <sup>13</sup>                                                                   |
| Median nerve                                       | Cannulation of brachial artery <sup>13</sup>                                                           |
| Superior laryngeal nerve; external laryngeal nerve | Thyroidectomy and other neck surgery <sup>11</sup>                                                     |
| Common or internal carotid artery                  | Extensive head-neck dissection <sup>13a</sup>                                                          |

Major surgery of the aorta, often with removal of aneurism and replacement with synthetic tube, incurs a small risk of occlusion of a major artery to the brain or spinal cord. On rare occasion the blood supply of several segments of spinal cord (especially in mid or low thoracic levels) is occluded by surgery of aorta or surgery at vertebral or para-vertebral sites from C<sub>6</sub> to L<sub>5</sub> (especially T<sub>8</sub> to L<sub>3</sub>). This includes thoracotomy and sympathectomy. A large radicular artery or several smaller ones rarely may be occluded by trauma there or at the proximal larger vessels, namely: ascending cervical artery, costovertebral arteries, supra-aortic intercostal arteries, aortic intercostal arteries, lumbar or ilio-lumbar arteries.<sup>16, 18</sup>

Prolonged occlusion of aorta during surgery may, likewise, cause infarction of vulnerable segments of spinal cord or ischemic

neuropathy of great nerves to lower extremities, or both.

Aortography in the recent past, with excessive concentration of radio-opaque material, resulted in occasional syndromes of spinal cord deficit, many transient, some not.<sup>17a</sup> Today cerebral arteriography begets an incidence of approximately three to five per cent of patients with acute focal cerebral deficit, permanent sequellae remaining in less than one per cent (most of these associated with arteriosclerosis).<sup>17b</sup>

Intramuscular injection has been known to include sciatic nerve<sup>18a</sup> and radial nerve. Venepuncture may rarely include median nerve in antecubital fossa. Extravasation of some irritant intravenous medications into subcutaneous or deep tissues may involve nerves (for example, norepinephrin).

### Distant Injury

Injury distal from surgical site is due usually to positioning of the anesthetized patient so that *pressure* and *stretching* involve neural tissues.

The *cervical spine* is particularly vulnerable in the hypotonic, anesthetized state. Sudden or excessive twisting or extension may be injurious. This has been reported in an infant receiving cleft palate repair during which excessive extension of neck resulted in fatal cord damage.<sup>19</sup> The elderly patient with cervical spondylosis and any patient with occult cervical disc herniation are also candidates for injury.<sup>20</sup>

*Lumbar* and *lumbosacral* spine may also be injured by sudden or excessive twisting, hyperextension or hyperflexion; loss of normal lordotic curve while lying supine, anesthetized and curarized; spine and hip hyperflexion in exaggerated lithotomy position for an hour or more; ancillary personnel flipping the patient about postoperatively. The common consequence is aggravation (rarely precipitation) of herniated intervertebral disc.<sup>20</sup>

*Arterial occlusion* from inadvertant, prolonged pressure on carotid arteries is possible. Likewise turning and extending the neck may occlude a stenotic vertebral artery in the elderly. Ischemic effects to brain

or limbs will be aggravated if either marked hypotension or hypoxia is present.

*Peripheral nerve injury* is no rarity in patients undergoing major surgery. Most often this is a transient annoyance. Occasionally permanent disability occurs. The varieties and causes of this nerve injury are well known and preventable.

*Brachial plexus injury* (usually to upper trunks) may appear in the arm abducted throughout surgery for intravenous anesthesia or therapy. In this position the following factors make for stretch and compression over first rib, head of humerus and other structures:<sup>2, 12a, 20-26</sup>

Arm abducted over 60 degrees.

Forearm supinated, arm externally rotated.

Arm hyperextended or dropped below level of body.

Hyperextension, tilting or turning head away from arm.

Depression of shoulder girdle posteriorly and laterally, displacing coracoid process (of scapula) and pectoralis minor tendon backward on brachial plexus.

Trendelenburg position necessitating shoulder braces ("rests"). Improperly placed, these may press deeply into supraclavicular region; or press the clavicle toward first rib, impinging brachial plexus between; or depress the lateral aspect of shoulder girdle, thence the head of the humerus and acromion process down on the brachial plexus.

Duration of positioning.

In a group of "normals" supine without anesthesia, abduction of arm to 90 degrees in external rotation produced sensory *signs* in 40 per cent of individuals by 60 minutes and motor loss in 20 per cent after 50 minutes.<sup>27</sup>

Additional factors affecting brachial plexus while arm is abducted and externally rotated include:

Gallbladder "rest" elevating thorax causing dorsal extension of arm.

Individual anatomical variation including scalenus muscles, cervical rib, anomalies of brachial plexus, abnormal slope of shoulders.

Muscle relaxants during surgery (?).

Any position of *hyperabduction* of arm during or following surgery incurs risk of brachial plexus injury.<sup>12a</sup> Prolonged pull on arms either at patient's side or in front of him in caudad direction also stretches brachial plexus over first rib; this has occurred



when patient has been maintained in Trendelenburg position by suspension from strapped wrists.<sup>12</sup>

*Ulnar nerve* is exposed to pressure as it passes subcutaneously in the notch of the medial epicondyle of the humerus. In some individuals the notch is shallow, or the nerve lies near its edge, relatively unprotected when the medial aspects of elbows rest for an hour or more on hard surfaces. In some instances the bony notch of the medial epicondyle may "fit" on the sharp edge of an operating table, allowing precise compression of this nerve.<sup>12a, 12, 26</sup> An occasional patient who lies more or less prone on his acutely flexed forearm may stretch the ulnar nerve to the extent of disability. Prolonged resting of volar surface of wrist on siderails of the bed has resulted in ulnar nerve compression.<sup>12a</sup>

*Radial nerve* is exposed to pressure as it courses down the posterior aspect of the humerus, somewhat but not completely protected by triceps muscle. Prolonged pressure, particularly against a protrusion, is usually at fault. The patient's arm may fall off the side of the table or bed to be impinged by the edge. The arm may be entrapped against the ether screen or other equipment.<sup>12a, 21, 26, 28</sup>

*Peroneal nerve* is exposed as it winds subcutaneously just below the head of the fibula. This nerve may be pressed against upright apparatus, or protrusions, straps or cuffs. With legs relaxed in external rotation, the nerve may be pressed against hard surfaces beneath.<sup>2, 12a, 21, 26</sup>

*Saphenous nerve* has been compressed against a vertical brace on the medial aspect of leg in lithotomy position.<sup>21</sup> The *femoral nerve* has been stretched excessively by a leg and thigh slipping off the bed, the thigh remaining long in hyperextension.<sup>12a</sup> The *tibial nerve* has been injured by pressure low in the popliteal fossa or leg dangling long over edge of bed. *Pudendal nerve* has been pressed against the ischial tuberosity with traction of legs against a vertical post in the perineal crotch.<sup>2, 21</sup> Sudden or violent abduction of thigh during movement of unconscious patient may stretch the

*obturator nerve* to produce paralysis.<sup>12a</sup> The *sciatic nerve* has been compressed at the gluteal fold with a thigh hanging over edge of bed.

*Cranial nerves* may be implicated during surgery. A patient's head may slip out of the head rest in face-down position compressing *orbital structures* critically. The supraorbital nerve has been injured by endotracheal tube connector lying on it. The *facial nerve* may be impinged at several sites by prolonged gripping of anesthetist's hand, by mask or straps.<sup>21</sup>

Tourniquets, straps, bindings, and cuffs must always be surveyed in regard to possible compression effects. The anesthetized, hypotonic patient is completely at the mercy of those who move him and position him. The struggling, delirious patient is likewise at risk as effort is directed to restraining him.

### Hypothermia

In the earlier years of hypothermia it was learned that peripheral neuropathies of variable severity could occur when limbs were cooled to temperatures considerably below those of internal organs. Hypothermic nerves are more susceptible to injury from pressure and stretching.<sup>29</sup>

### Spinal Anesthesia<sup>30</sup>

The present-day, very rare ill effects of spinal (subarachnoid) anesthesia are likely of toxic, chemical nature rather than traumatic. The reasons for these unusual reactions include one or more of the following:

- Use of detergents or antiseptics not subsequently removed from syringes, needles, ampules.
- Wrong solutions in ampules labelled to contain anesthetic agents.
- Wrong ampule provided anesthetist who fails to read label.
- Excessive concentration of anesthetic agent or degradation products thereof.
- Individual idiosyncrasy.
- Hypotension or respiratory paralysis, or both, (from spinal anesthesia) causing hypoxia to neural structures.
- Inadvertant injection of anesthetic agent into nerve root, thence spread into spinal cord; or direct injection into spinal cord.
- Infection (contamination).



Severe, although transient, headache appears in approximately 10 per cent of patients postoperatively. Short-lived paresthesias, diplopia, sphincter disturbances and leg muscle weakness are noted in a small number.

One or more of the following critical neurologic syndromes may appear in the postoperative or convalescent state:

- Myelopathy (conus medullaris).
- Neuropathy, radiculopathy (cauda equina).
- Arachnoiditis-meningitis.

Rarely, too, cranial nerve palsy (especially VI) appears following spinal anesthesia. This appears due to continued leak and loss of spinal fluid at the dural tear which decreases volume of basilar cisterns under the brain, allowing descent of brain and brainstem, stretching longer cranial nerves. Toxic and hypoxic factors may also be requisite. This phenomenon appears 3-21 days after spinal anesthesia and is transient.

In a small percentage of elderly patients, cerebral vascular syndromes appear in postoperative or convalescent period. These can hardly be attributed to spinal anesthesia and the incidence appears no greater than with other forms of anesthesia for surgery of similar magnitude. The very rare convulsion with (during) spinal anesthesia is due to other, coincidental factors.

Relative contraindications to spinal anesthesia include those of lumbar puncture as well as:

Any pre-existing neurologic disease.

The patient who desires not to have this form of anesthesia.

In less than 10 per cent of patients presenting symptoms "due to" spinal anesthesia are symptoms due, in fact, to spinal anesthesia. EMG studies are often valuable in these diagnostic problems.

### Epidural Anesthesia<sup>31</sup>

Local anesthetic solution, injected into epidural space reaches nerve roots to provide excellent segmental anesthesia. Contraindications include local infection or hemorrhagic disease. Consideration must also be given to pre-existing neurologic disease at or near the site and the patient who anticipates dire consequences of this modified spinal anesthesia. Risks and complications, rare in the hands of experienced anesthesiologists, include:

Perforation of dura-arachnoid, producing spinal (subarachnoid) anesthesia with risks of hypotension and respiratory paralysis.

Traumatic epidural hematoma.

Injection into nerve root, then via perineural spaces, diffusion into spinal cord.

A 0.2-0.5 per cent incidence of grand mal convulsion during administration of anesthetic. Perhaps more likely with new anesthetics and when epinephrine not included in solution (rapid absorption).

Transient, mild segmental sensory or motor loss, persisting several days.

Hypotension.

Extensive epidural spread of anesthesia, even to high cervical level. Likely related to volume of solution and pressure applied.

(References may be obtained from author).

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The treatment of epilepsy has advanced more in the past 25 years than in the previous 2500. Yet, many people still regard epilepsy cases as "hopeless," according to The Epilepsy Foundation. For facts on this little-understood malady write to: The Epilepsy Foundation, Washington, D. C. 20005.

## Coming Meetings

### CRIPPLED CHILDREN'S CLINICS—

September 11 — Cozad, Elks Club

September 25 — Sidney, Elks Club

October 9 — McCook, St. Catherine's Hospital

October 23 — Grand Island, St. Francis Hospital

### AMERICAN ASSOCIATION OF BLOOD

BANKS — 18th annual meeting; Americana Hotel, Bal Harbour, Florida, September 14-17. Info: The Association at 30 North Michigan Ave., Chicago 2.

### MICHIGAN: CENTENNIAL SESSION —

The Michigan State Medical Society will hold its Centennial Session in Detroit, with headquarters at the Sheraton Cadillac Hotel, September 19-24, to celebrate "a century of service in medicine."

### OCCUPATIONAL HEALTH CONGRESS—

The 1965 Congress on Occupational Health, sponsored annually by the AMA Council on Occupational Health, will be held concurrently with the Indiana State Medical Association's annual convention. The meeting will take place at the Murat Temple in Indianapolis, October 12-14. Additional information may be obtained from: Department of Occupational Health, AMA, 535 North Dearborn Street, Chicago, Illinois 60610; or from the Indiana State Medical Association, 3935 North Meridian Street, Indianapolis, Indiana 46208.

### ANNUAL MEETING OF ARTERIOSCLEROSIS COUNCIL —

The Council on Arteriosclerosis of the American Heart Association will hold its annual meeting at the Hotel Deauville, Bal Harbour, Florida, on October 13 and 14. Write to the American Heart Association, 44 East 23rd Street, New York, NY 10010.

### AAMA PLANS EDUCATIONAL SEMINAR —

The American Association of Medical Assistants will hold its annual meeting in New York, October 13-17. A two-day educational seminar is offered

on October 15 and 16, at the Roosevelt Hotel. The address of the AAMA is 510 North Dearborn Street, Chicago 10, Illinois.

### AMERICAN HEART ASSOCIATION —

The (38th) annual Scientific Sessions of the American Heart Association will be held October 15-17, 1965 at the Hotel Americana, Bal Harbour, Florida. There will be six programs on clinical cardiology and simultaneous sessions on specialized cardiovascular subjects. Write to local Heart Associations or to the AHA national office, 44 East 23rd Street, New York, NY, 10010.

### AMERICAN ACADEMY OF PEDIATRICS

— Palmer House, Chicago, 34th annual meeting, October 23-28. Write to the American Academy of Pediatrics, 1801 Hinman Avenue, Evanston, Illinois 60204.

### DISASTER MEDICAL CARE —

The 16th National Conference on Disaster Medical Care will be held at the Drake Hotel in Chicago, October 30 - 31. Information: Council of National Security, AMA, 535 North Dearborn Street, Chicago, Illinois 60610.

### 1965 POSTGRADUATE COURSES SPONSORED BY THE AMERICAN COLLEGE OF CHEST PHYSICIANS —

Clinical application of cardiopulmonary physiology: Knickerbocker Hotel, Chicago, October 18-22. Diagnosis and treatment of diseases of the heart and lungs: Barbizon Plaza Hotel, New York City, November 15-19. What's new in the diagnosis and treatment of cardiovascular and pulmonary diseases: Fountainebleau Hotel, Miami Beach, January 24-28, 1966. Clinical application of cardiopulmonary physiology: Ambassador Hotel, Los Angeles, February 14-18, 1966. Cine-angiographic techniques in cardiovascular diseases: Cleveland Clinic, Cleveland, April 11-13. Write to: American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

### THE OMAHA MID-WEST CLINICAL SOCIETY'S 33rd ANNUAL FOUR-DAY

**POSTGRADUATE ASSEMBLY** — Will convene in the Civic Auditorium, October 25, 26, 27 and 28. This program is acceptable for 32 accredited hours by the American Academy of General Practice.

**ANNUAL OTOLARYNGOLOGIC ASSEMBLY** of 1965 — Will be held October 30 through November 5, in the new Illinois Eye and Ear Infirmary at the Medical Center, Chicago. The Department of Otolaryngology of the University of Illinois College of Medicine offers a condensed postgraduate basic and clinical program for practicing otolaryngologists under the direction of Doctor Emanuel M. Skolnik. It is designed to bring to the specialists current information in medical and surgical otorhinolaryngology. Info: Department of Otolaryngology, College of Medicine of the University of Illinois at the Medical Center, Chicago Box 6998, Chicago, Illinois 60680.

**CORNHUSKER CONFERENCE ON SURGERY** — Will be held on November 6, 1965, from 9 a.m. to 11:30 a.m., at the Nebraska Center for Continuing Education, in Lincoln, Nebraska. For information and reservations, write to the Department of Surgery, University of Nebraska College of Medicine, Omaha, Nebraska.

**THE INAUGURAL SCIENTIFIC PROGRAM** of the new Ancker Hospital (Saint Paul-Ramsey Hospital) will be held on November 11, 12, and 13, 1965. Speakers will include Dr. Martin Cummings (Director, National Library of Medicine), Ernest Lowe (Chief of Obstetrics and Gynecology, D.C. General Hospital), Victor Buhler (President, American College of Pathology), John Haserick (Department of Dermatology, Cleveland Clinic), Robert Hollenhorst (Section of Ophthalmology, Mayo Clinic), J. A. Donaldson (Professor of Otolaryngology, University of Washington), Herman Moers (Mayo Clinic), Edmund Flink (Professor of Medicine, University of West Virginia), Burtram Schiele (Professor of Psychiatry, University of Minnesota), F.

John Lewis (Professor of Surgery, Northwestern University), and Russell Lucas (Associate Professor of Pediatrics, University of West Virginia). All physicians are invited. Write to James F. Hammarsten, MD, Chief of Medicine, Ancker (Saint Paul-Ramsey) Hospital, Saint Paul, Minnesota.

**FIRST NATIONAL CONFERENCE ON AREAWIDE HEALTH FACILITIES PLANNING**, AMA — Americana Hotel, Bal Harbour, Florida, November 28-29, 1965.

**Future Meetings of the American College of Surgeons—**

**ANNUAL CLINICAL CONGRESS**, October 18-22, 1965, Atlantic City, New Jersey.

— 1966 —

**BAL HARBOUR, FLORIDA**, January 13-15. Sectional Meeting. Americana Hotel.

**HOUSTON, TEXAS**, January 31 - February 2. Sectional Meeting. Sheraton-Lincoln Hotel.

**CLEVELAND, OHIO**, March 14-17. Annual 4-Day Sectional Meeting for Doctors and Graduate Nurses. Sheraton-Cleveland and nearby hotels.

**ANNUAL CLINICAL CONGRESS**, October 10-14, 1966. San Francisco, California.

For any advance information address: Secretary, American College of Surgeons, 55 East Erie Street, Chicago, Illinois 60611.

**ANIMAL CARE PANEL** — 16th Annual Meeting; Sheraton Hotel, Philadelphia; November 15-19, 1965. Contact Mr. Joseph J. Garvey, Executive Secretary, 4 East Clinton Street, Joliet, Illinois 60434.

**THE HAHNEMAN MEDICAL COLLEGE AND HOSPITAL** of Philadelphia offers the following Postgraduate Education Courses during 1965 and 1966:

—November 22-24, 1965; 15th Hahneman Symposium Cancer Chemotherapy; Dr. Isadore Brodsky; Sheraton Hotel.

—December 8-10, 1965: A Hahneman



Symposium on New Concepts in Gynecological Oncology; Dr. George C. Lewis; Sheraton Hotel.

—April 20-23, 1966: 16th Hahneman Symposium, Arterial Occlusive Disease; Dr. Albert N. Brest; Marriott Motor Hotel.

—December, 1966: 17th Hahneman Symposium, Nutritional Dysfunction; Dr. Donald Berkowitz; Sheraton Hotel, Philadelphia.

**SECOND NATIONAL SYMPOSIUM ON COCCIDIOIDOMYCOSIS** — December 8-9-10, 1965, Del E. Webb Towne House, Phoenix, Arizona. For further information, contact: Arizona Tuberculosis and Health Association, Inc., 733 West McDowell Road, Phoenix, Arizona 85007.

**CONTINUING EDUCATION** — Closed Chest Resuscitation; University of Nebraska College of Medicine, at Eppley Research Institute, March 8, 1966 (for physicians, 9th for dentists, and 10th for nurses). Info: Continuing Education, University of Nebraska College of Medicine, 42nd and Dewey, Omaha 5.

**NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS** — "Vision for the Space Age;" Houston, Texas, Rice Hotel, March 24-26, 1966. Info: Director of Information John D. Coleman, 16 East 40th Street, New York 10016.

**FIRST ANNUAL BIOMEDICAL LASER CONFERENCE** — June 17-18, Sheraton-Boston Hotel, Boston, Massachusetts.

**TENTH WORLD CONGRESS OF THE INTERNATIONAL SOCIETY FOR REHABILITATION OF THE DISABLED** — September 11-17, 1966, Rhein-Main-Hall, Wiesbaden, Germany.

## Correspondence

To the Editor:

A paper recently presented to the American Diabetes Association (Grabor, Port, and Williams *Diabetes* 14:450, 1965) mentioned

use of diazoxide in controlling the hypoglycemia of an adult with islet cell carcinoma. Diazoxide, a non-diuretic benzothiadiazine thus seems to offer promise in the otherwise often unsatisfactory management of idiopathic hypoglycemia in infants and children.

No use of this drug in infants and children has yet been announced. Members of the Department of Pediatrics, University of Nebraska, desire to initiate such a study and would like to cooperate in management of such cases. It is suggested that physicians contact the Department of Pediatrics directly with respect to any suitable case. Patients will be acceptable regardless of economic status.

The drug is given orally. It is not yet available for routine use, but only with the extensive safeguards now required for trial of experimental drugs. The Department of Pediatrics has had experience with this drug in studies on monkeys. The hyperglycemia which it produces is completely reversible.

Gordon E. Gibbs, MD,  
Chairman, Department  
of Pediatrics,  
University of Nebraska  
College of Medicine,  
Omaha, Nebraska

## Medicare in Operation

Payment for the After-Care of a Bodily Injury and Surgical Procedure Under The Medicare Program—

The only payment authorized under the Medicare Program for the after-care of the same bodily injury, or surgical procedure for which the patient has been treated, will include laboratory tests, X rays, dressings and cast materials in direct connection with the injury or surgery. Examinations, either physical or orthopedic, or office calls are not authorized, therefore are not payable.

Consultation is authorized as an outpatient only, during the time the patient is being treated for bodily injury by the attending physician. Consultation is not authorized for the after-care of a bodily injury, once

the patient has been dismissed from the care of the attending physician, and he has received payment in full in accordance with the Medicare Schedule of Allowances.

## THE MONTH IN WASHINGTON

Health, Education and Welfare officials are drafting rules and regulations for operation of the new Social Security medicare law.

The new law provides for persons 65 years and older a basic hospitalization plan financed with Social Security taxes and a subsidized, voluntary, supplementary medical insurance program. Both programs will start July 1, 1966.

The existing Kerr-Mills program of medical assistance to the needy and near-needy aged is expanded and combined with all the other federal-state medical assistance programs into one plan with simplified administration, a uniform grant formula, specified benefits and minimum eligibility requirements.

Self-employed physicians are brought under Social Security retroactive to Jan. 1, 1965. They will be required to pay next April \$259.20 each in Social Security taxes for this year. The tax will go up to \$405.90 for 1966 and rise over the years to \$514.80 by 1987. Physicians were the last profession to be covered by Social Security and the only group to be forced into the system over the protests of its professional organization.

Coverage and liability for taxes for interns and residents will not begin until Jan. 1, 1966.

The new law also increases Social Security cash benefits by an average of seven per cent, retroactive to Jan. 1, 1965.

To finance the new health care programs and the increase in cash benefits, both the Social Security tax base and tax rates will be increased. The tax base will be increased from the present \$4,800 of workers' annual pay to \$6,600 on Jan. 1, 1966.

Arthur E. Hess, who has been with the

Social Security Administration since 1939 and in charge of disability insurance since 1954, has been named to head up the new SSA Bureau of Disability and Health Insurance to handle the medicare program. A spokesman said the SSA, which now has 35,000 employees, will add between 7,000 and 8,000 more in the next year to administer the program.

President Johnson went to Independence, Mo., to sign the legislation (HR 6675) July 30 in the presence of former President Harry S. Truman who 20 years ago proposed in his legislative program a national medical insurance plan for all ages financed by higher Social Security taxes.

Commenting on the medicare program becoming law, F. J. L. Blasingame, MD, executive vice president of the AMA, said in Chicago:

"We will watch developments in this new program and offer constructive suggestions both to Congress and to the administrators of the program, in the interest of the maintenance of the highest quality of medical care.

"President Johnson has requested that we meet with officials of the Department of Health, Education and Welfare on the development of rules and regulations.

"Following our conference with Mr. Johnson on Thursday (July 29), initial meetings were held with HEW Secretary Anthony Celebrezze, exploring arrangements for AMA and HEW review of projected regulations and of problems of administration and interpretation of the law.

"The President also asked that we report back to him in two months on our progress."

The White House conference between Johnson and 11 top AMA elected and staff officials, developed from an action of the AMA House of Delegates in New York last June. The House approved a resolution including the following two resolves:

"Resolved, That this House of Delegates restate its offer to meet with the President of the United States through our Legislative Task Force to discuss proposed medical



care legislation with a view to safeguarding the continued provision of the highest quality and availability of medical care to the people of the United States . . .

"Resolved, That the American Medical Association strongly urge those branches of the government interested in the formulation, the enactment, and the implementation of laws which deal with the provision of professional medical services to the public to seek and utilize the advice and assistance of the physicians who will render such services. Such advice and assistance should be received through our chosen representatives, the officers of the American Medical Association . . ."

The first AMA-HEW conference on medicare at the staff level was held in Washington a week after the program became law.

HEW was consulting representatives of the American Hospital Association even before the legislation was signed into law.

The Social Security Administration, in administering the basic and supplementary health care programs, will utilize Blue Cross, Blue Shield, private health insurance carriers or combinations of them as "fiscal intermediaries." At this writing, they had not been named.

HEW said the physician will be the key figure in the basic as well as the supplementary program. He will decide upon admission to a hospital or posthospital extended care facility, order tests, drugs and treatment, including home health services, and determine the length of stay, HEW said.

As to length of stay, however, hospitals and extended care facilities participating in the program will be required "to have in effect a utilization review plan providing for a review of admissions, length of stays and the medical necessity for services provided."

Such reviews "would ordinarily be carried out by staff committee of the institution," and include other professional personnel such as registered nurses and medical social workers in addition to two or more physicians.

As an alternative, HEW said, reviews could be conducted by a similar group out-

side the institution — preferably one established by the local medical society and some or all of the hospitals and extended care facilities in the locality.

Under the supplementary program, the patients could pay the doctor and be reimbursed 80 per cent of a "reasonable" fee. If the doctor so chose, he could let the patient assign to him the amount the patient would be reimbursed. If payment is on the basis of an assignment, the "reasonable" fee would have to be accepted as the full payment. If the physician receives payment only directly from the patient, he can charge the amount he chooses regardless of what is determined to be a "reasonable" fee.

In determination of a "reasonable" fee, HEW said, the supplementary insurance carriers, must "assure that the charge on which the reimbursement is based is reasonable and is not higher than the charge used for reimbursement on behalf of the carriers own policyholders or subscribers for comparable services and under comparable circumstances."

#### SUMMARY OF LAW'S HEALTH CARE PROVISIONS BASIC PROGRAM

##### Hospitalization—

Up to 90 days in each spell of illness. The patient pays the first \$40 of hospital costs. If he stays more than 60 days, he pays \$10 for each additional day up to the 90-day limit. A spell of illness starts with the first day of hospitalization and ends when the patient has spent 60 consecutive days without hospital or nursing care.

The hospitalization covers room and board, prescribed drugs while hospitalized and other services and supplies except private duty nursing and services of physicians other than internes or residents in training. Christian Science sanatoriums and psychiatric hospitals are included. There is a lifetime limit of 190 days in a psychiatric hospital.

##### Nursing Home Care—

Up to 100 days in an extended care facility in each spell of illness after a stay of at least three days in a hospital. There is



no charge to the patient for the first 20 days. The patient pays \$5 for each day above 20, up to the 100-day limit.

#### Home Nursing—

Up to 100 visits by nurses or technicians in a one-year period following the patient's discharge from a hospital or extended care facility. The services furnished must be in accordance with a program set up and periodically reviewed by a physician.

#### Diagnostic Services—

Tests and related diagnostic services, other than those performed by physicians, that are normally provided by hospitals to outpatients. The patient pays \$20 of the charge for each diagnostic study provided by the same hospital in a 20-day period. The patient pays 20 per cent of the charges above \$20.

#### SUPPLEMENTARY PROGRAM

Persons enrolling in this program will pay \$3 a month in premiums. The federal government will match this with a payment of \$3 a month for each participant. The federal share, about \$600 million a year, will come from general tax revenues. The insurance supplements the basic program by covering most other major medical expenses except those for dental services, medicines and drugs.

A participant in the program pays \$50 of his annual costs for the services and supplies covered. He also pays 20 per cent of the annual costs above \$50 while the program pays 20 per cent.

The coverage includes:

Physicians' services, including surgery, whether performed in a hospital, clinic, office or home.

Up to 100 home nursing visits each year in addition to those allowed under the basic program and without any requirement for prior hospitalization.

Various services and supplies, whether provided in or out of a medical institution, such as X ray and other diagnostic tests, radiological treatments, surgical dressings, splints, casts, iron lungs and other specified

prosthetic devices, artificial arms, legs and eyes and ambulance service.

#### WELFARE AID

The bill authorizes increases of about \$400 million in annual federal grants to states for public assistance (relief of the needy) and other welfare programs. It consolidates the Kerr-Mills medical assistance program with five related programs and sets federal standards for the scope of benefits and eligibility of beneficiaries.

A new program of health care for children in impoverished families is established, with \$185 million in grants authorized for the first five years. Grants for maternal and child health services and aid to crippled children are raised in four steps from the present level of \$80 million to \$120 million in 1970.

By revising the general formula for public assistance grants, the bill raises annual federal authorizations by \$150 million.

## Announcements

#### Medical Transportation Communication Study—

The University of Nebraska College of Medicine is presently undertaking the first survey of the existing medical transportation communication facilities of the State of Nebraska. Doctors Lynn W. Thompson and Carlyle Wilson of the Department of Surgery are the Chairmen of the Nebraska Medical Transportation Communication Study. We, as physicians, have grossly neglected this very important phase of medical care while we have devoted our time to other aspects of the healing art.

Each practicing physician will have received a questionnaire from this committee by the time this letter is published. I feel it is your duty to complete and return the questionnaire as soon as possible. Another questionnaire will be in the hands of the mayor of your community and another to each ambulance operator, rescue squad chief, and funeral director providing ambulance service. I strongly urge each of you to make certain that these other persons complete

and return to this committee their respective questionnaires.

Although the transportation of the sick and injured is only one part of the overall medical care of the patient, it can be one of the most important. Your help to this group is most essential.

The first program conducted by the Medical Transportation Communication Study will be on October 30 and 31 at the Nebraska Center for Continuing Education, Lincoln, Nebraska. Every physician interested in the problem of medical transportation is urged to attend.

#### National Epilepsy Organizations to Merge—

Epilepsy Association of America and the Epilepsy Foundation, this country's two major voluntary epilepsy organizations, have agreed in principle to merge. Merger committees have already been appointed; consolidation is expected by the end of the year. The two organizations have cooperated in sponsoring National Epilepsy Information Month in June, 1965. The Epilepsy Foundation was incorporated in 1954 and has its headquarters in Washington, D.C. Epilepsy Association of America resulted from the merger of three national organizations in January, 1965; its headquarters are in New York City.

#### Ethics and Professionalism—

A National Congress on Medical Ethics and Professionalism is to be sponsored by the AMA and will be held at the Drake Hotel in Chicago, October 2-3. It will be the first such meeting sponsored by the AMA. Speakers will include AMA President James Z. Appel, MD, and Walter H. Judd, MD, former U.S. Congressman and now a member of the AMA's Judicial Council. Write to: James H. Berge, MD, Chairman, Judicial Council, AMA, 535 North Dearborn, Chicago, Illinois 60610.

#### AMA Publishes Areawide Planning Directory—

The first directory of health facility planning agencies in the U.S. has been published by the AMA. It consists of 196 pages and

was prepared by the Department of Hospitals and Medical Facilities of the AMA. Single copies are available without cost to physicians, medical associations, community health organizations, and research workers. Write to: Department of Hospitals and Medical Facilities, AMA, 535 North Dearborn, Chicago, Illinois 60610.

## Doctors in the News

### Nebraska Doctor Aids Thailand Medical School—

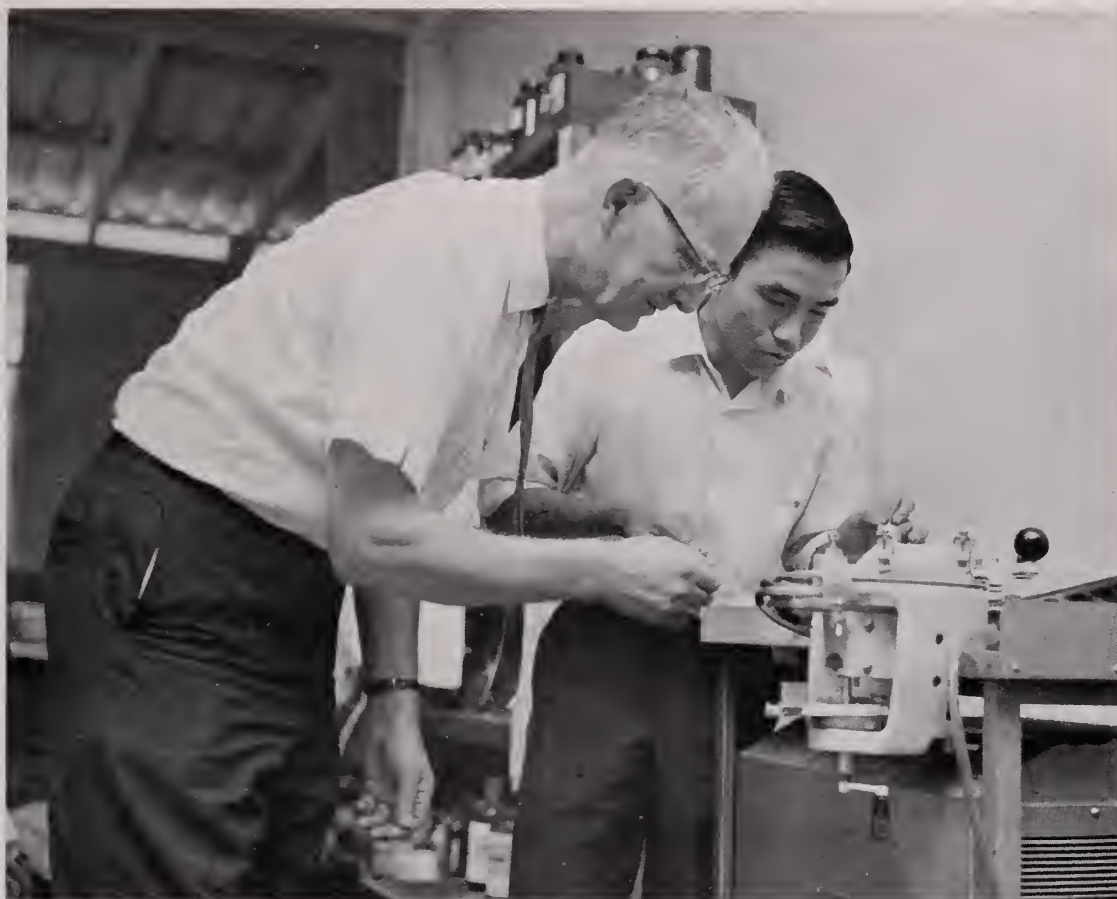
A five-year-old medical school in Chiangmai, Thailand, is producing an increasing stream of well qualified young doctors to minister to Thailand's growing population. Dr. J. Perry Tollman, Omaha, Nebraska, serves as visiting professor of pathology with a team of educators of the University of Illinois who are helping introduce modern American medical education methods there under a contract with the Agency for International Development.

The Chiangmai school is the first ever built in Thailand outside the capital area. The first two graduating classes received high honors in nation-wide examinations. Competing against graduates of long-established Bangkok schools, the Chiangmai class of 1964 took seven of the top 10 places, while the 1965 class swept 10 of the top 12.

The Chiangmai school is intended to ease the acute shortage of doctors which plagues the nation's hinterland. The American advisory team consists of 10 Illinois professors, a hospital administrator and a Secretary.

The majority of the Thai faculty at Chiangmai have received advanced training in the U.S. on AID study grants. They are familiar with modern teaching and research techniques. The job of the team is to help provide adequate equipment and to suggest how it can be used to best advantage for students and patients.

Although most members of the Illinois team teach classes or treat patients themselves, their main responsibilities are to advise department heads on curriculum, to in-



J. Perry Tollman, MD, professor of anatomical pathology, and technician Aroon Kao Sa'at making a frozen section in the pathology laboratory.

--Photo by USAID

introduce new techniques of teaching and treatment, and to stimulate research by faculty and students into indigenous medical problems. The American advisors have urged that lecture hours be pared to give students more time to work with patients, perform research under faculty direction, and learn on their own.

The Chiangmai medical student spends his first two years in an intensive study of the basic sciences: anatomy, biochemistry, physiology, microbiology, pharmacology and pathology. During his last two years, while continuing his classroom study, he spends much of his time working with a small group of his fellows on clinical cases under a faculty member's direction. This method of teaching, in which students receive actual cases experience in several major areas of medicine, lets him handle patients at an early stage of his training. It is a major feature of the program at all leading Amer-

ican medical schools, but had not been highly developed in Thailand before the Illinois group arrived.

The basic science department's staffing problems are expected to ease as young scientists return from the U.S. to take up teaching positions at the school. Fifty members of the Faculty of Medicine and 18 nurses from the Faculty of Nursing have received or are now undergoing advanced training in the U.S. on AID study grants. Each graduate who accepts such a grant agrees that on his return he will teach at Chiangmai for at least twice the period of training.

Several members of the Illinois team have set up research projects and asked their Thai colleagues and students to join them in carrying them out.

Dr. Tollman is the son of Mrs. J. M. Tollman of Marsland, Nebr. He received his



MD degree from the University of Nebraska College of Medicine, where he was Professor of Pathology and Dean of the Medical College before he went to Thailand. He is a member of the American Medical Association and the American Society of Clinical Pathologist.

He and his wife Elizabeth expect to leave Thailand next September and return to Nebraska, where he will resume his position on the faculty of the University of Nebraska.

#### Nebraska Junior Chamber Elects—

Doctor Gordon D. Francis, of Arapahoe, was elected to a position on the Executive Committee of the Nebraska Junior Chamber of Commerce as one of 13 vice presidents in May, 1965.

#### Top Sertoma Award to Nebraska Physician—

Dr. Keith W. Sehnert of Lincoln was recently named Sertoman of the Year by Sertoma International at its annual convention in Las Vegas, Nevada. Dr. Sehnert was cited for his devotion to the speech and hearing project which he originated with the Lincoln Sertoma Club.

## News and Views

#### Continuing Psychiatric Education—

It is heart-warming to see our own Nebraska singled out in the lead paragraph in *Psychiatry and Medical Practice Bulletin*, from the American Psychiatric Association Committee on Psychiatry and Medical Practice. The American Psychiatric Association has its headquarters in Washington, D.C. Doctors with formal continuing psychiatric education are making a real contribution to Nebraska's mental health program, they say, where neither mental health clinics nor private psychiatrists can be supported. State hospitals are protected from avoidable first admissions and readmissions, disturbed people are treated who might not otherwise be treated, and a contribution is being made to public education. Under Nebraska's Psy-

chiatric Institute supervision, these doctors devote their offices for a half-day or more each week, to these patients; the physicians have each spent a year at the NPI.

#### Infant Death Rate Reduced—

Infant deaths, according to the AMA, were at a record low last year, both in percentage and in actual numbers. The rate was 24.2 deaths per 1000 live births, four per cent below the figure for 1963, and 17 per cent below the 1950 rate.

The number of infant deaths was 98,100 in 1964, approximately 5290 less than in 1963.

A special conference on infant mortality has been sponsored by the AMA Committee on Maternal and Child Care, and will be held July 30, in Chicago. The Committee has invited 50 participants; the conference is planned to discuss problems relating to further infant mortality reduction, availability and quality of service, and manpower problems in the providing of maternal and child care services.

#### We Never Stop Studying—

Medical refresher course attendance has increased sharply, the AMA reports. The number of postgraduate courses in the U.S. has risen more than 50 per cent during the last five years. The AMA Council on Medical Education reports that 71,000 physicians were registered in only half the number of courses offered during 1964, compared with an enrollment of 18,800 in 1954-1955. 1641 postgraduate courses are available to doctors during the 1965-1966 school year; courses are offered by 250 institutions in almost every state.

#### New High in Hospital Cost—

Figures released in the Guide Issue of *Hospitals* indicate a new high in hospital cost per patient day in 1964. The cost per patient day reached \$30 in 1959, nearly \$39 in 1963 (for nonfederal short term general and special hospitals in the U.S.), and \$41.58 in 1964, an increase of 6.9 per cent over 1963.

Total expense for all hospitals rose nearly 10 per cent to 12 billion dollars. Most of the increase in cost was found in payroll expense, which amounts to two thirds of the hospital's dollar.

Total births fell from a high of 3,908,121 to 3,784,666 in 1963, and to 3,729,382 in 1964. The number of registered hospitals fell from 7,138 to 7,127. The number of hospital beds declined from 1,702,000 to 1,696,000; average daily occupancy was 83.8 per cent.

#### Innocent Until Proven Guilty—

Daniel K. Bloomfield, MD, Director of Cardiovascular Research at the Community Health Foundation in Cleveland, Ohio, writing in *The Heart Bulletin*, reminds us that heart murmurs are commonly heard in asymptomatic patients who have no other indication of heart disease, and that these murmurs, like the accused, should be judged to be innocent until proven guilty. Daily, the practicing cardiologist sees potential athletes defeated by the wrong diagnosis, the potential mother barren for the same reason, and the frantic father unable to purchase life insurance because of an "over-anxious stethoscope."

He reminds us that:

1. Murmurs, soft in character, heard in the thriving, symptom-free infant need rarely cause immediate concern.
2. Funnel chest is a very common cause of functional systolic ejection murmurs.
3. Palpation of a thrill almost always is indicative of organic heart disease. Murmurs associated with a thrill are not benign.
4. The most important characteristics of completely benign murmurs are that they are systolic, short, and soft.

William Evans' wonderful statement, "'Tis an advantage for a cardiologist to be a little bit deaf," does proper justice to the ultra-quiet murmur. (*The Heart Bulletin*, July-August, 1965).

## News from Our Medical Schools

### New Surgeon at Creighton U. School Of Medicine—

Dr. Raymond C. Doberneck has joined the faculty of the Creighton University School of Medicine as an assistant professor of surgery. A graduate of the Marquette University School of Medicine, he took his internship, surgical residency, and PhD in surgery at the University of Minnesota.

He has done special work with renal disease, pancreatitis, and liver disease.



DR. RAYMOND C. DOBERNECK

### Kellogg Grant to Creighton—

A grant of \$486,675 by the W. K. Kellogg Foundation to the School of Medicine of Creighton University in Omaha, Nebraska was announced recently. Doctor Richard L. Egan, Dean, said that the money will be used to aid development of the faculty, particularly in microbiology, psychiatry, and preventive medicine, and to implement the engagement of an Associate Dean.

## Human Interest Tales

Doctor Roderick R. Landers has opened a practice in Pathology at Norfolk.

Doctor Wesley G. Wilhelm, Omaha, has joined the Ogallala Medical Clinic.

Doctor Robert R. Taylor has joined the medical practice of Doctor Paul F. Bottom in Ogallala.

Doctor Finn Lunde, Hastings, resigned his post as superintendent of the Hastings State Hospital in July.

Doctor John F. Latenser, Omaha, was guest speaker at the meeting of the Rotary Club held in July.

Doctor D. L. Kuxhausen has left McCook for the Baylor University Medical Center for further training.

Doctor Thomas Laird has been associated with Doctor Frank Kamm at the Blue Hill Clinic since July 1st.

Doctor Richard T. Rappolt, Sr., has opened his medical practice at the Doctor Walter Goehring Clinic in Blair.

Doctor Marquis W. Hineman has opened practice in Crete, having moved from western Nebraska where he practiced for eight years.

Doctor Walter F. Giegerich, formerly of Atlantic, Iowa, has been named medical director of Archbishop Bergen Mercy Hospital in Omaha.

John H. Bancroft, MD, is now associated with his father B. R. Bancroft, MD, and K. F. Kimball, MD, in the practice of surgery at Kearney, Nebraska.

## The Woman's Auxiliary

### President's Message

I should like to express my thanks to the members of the Woman's Auxiliary to the Nebraska State Medical Association for the confidence they have placed in me by electing me their president for the year 1965-1966. I shall try to execute the duties of that office to the best of my ability.

In order to accomplish the work expected of our organization it will take the combined efforts of every member. To keep the Medical Auxiliary in its highly regarded position will necessitate the care and attendance of each individual member.

Each County President and her committee Chairmen will be confronted with problems unique to the community in which they live. It is true that a large portion of the State Auxiliary is represented by the physician's wife from the metropolitan districts; but let me remind you that a great and important proportion is typified by our smaller communities. For this reason State Chairmen have been selected from all parts of Nebraska. What better way to keep abreast of the problems of each community? Without their help your president would be completely ineffectual in administering to the needs of the state.

Our responsibility is to educate the physician's wife to be a constructive force in her community. We must all be informed of the unmet health needs. What can be done about these problems? What can the Auxiliary do to help? What can you as an informed citizen do? Our members must first understand the "reason why" if they are to be motivated into effective action. It is a complete waste of time to do nothing but sit back and criticize. We must solve the health problems on a local level if we are to combat further intervention by the national government.

The strength of this country lies in its ability to try new ways to meet its needs. The saddest obituary ever written on the pages of time is: "We've always done it this way." The Executive Board of the Woman's Auxiliary to the American Medical Association believes that each state and county must remain flexible in its program planning in order to meet new problems as they arise. The National Board is willing and anxious to help by giving general ideas, but they feel that the responsibility of program planning must remain with the state and county.

At both the national and state levels the underlying and ultimate concern is to provide support for the county level. From the county level is acquired the unity and purpose of our organization, without which it would be completely ineffective. For YOU of the County Auxiliary are the grass roots that feed and nourish the State and National Auxiliary.

It has been said that "utilizing woman



power is like the triggering of atomic energy — it has a chain reaction” . . . but YOU are the ones who must set it off, and this can be done only if we all work together with a common purpose — that of maintaining American Medicine as the best in the world.



## Know Your Blue Shield Plan

### Federal Employees' Contract

The majority of federal government employees have been enrolled in a Blue Cross-Blue Shield Contract providing a broad scope of benefits since July, 1960. From time to time since this special contract was introduced, changes have been incorporated in it. To bring you up to date with the coverage provided under the “Government-wide Service Benefit Plan,” here is a rundown of the benefits currently available to federal workers and their families through Blue Cross and Blue Shield.

Federal workers have been able to select the type of Blue Shield-Blue Cross contract under which they wish to be covered. There are two choices — a Low Option and a High Option — the latter providing a broader scope of benefits and higher allowances than the former. In the Nebraska Blue Cross-Blue Shield area approximately 28,000 federal employees — including their families — are enrolled in “FEP” — the Federal Employees' Program. Over 22,000 of them are covered under High Option.

The Paid-in-Full Benefits income ceilings are:

\$6,000 (individual) and \$7,500 (family) for the High Option Contract.

Allowances provided for physicians' services are those listed in the 1964 Schedule of Allowances under the Series 75 Schedule. (\$6,000/\$7,500).

### Basic Blue Shield Surgical-Medical Benefits—

The basic Blue Shield portion of the Con-

tract provides benefits for the following services:

- Surgery — Operating or cutting procedures for the treatment of diseases or injuries, or for the treatment of fractures and dislocations.
- Oral Surgery — Limited to surgical procedures related to the jaws and structures contiguous to the jaws including removal of impacted teeth of a hospitalized bed patient but excluding other procedures involving the teeth.
- Anesthesia Service — When performed by a physician, other than the operating surgeon or his assistant, for covered surgery or obstetrical care.
- Radiation Therapy — Treatment by use of X ray, radium, and radioisotopes.
- In-Hospital Medical Care — Physicians' visits to a hospitalized bed patient for treatment, other than surgical or obstetrical care, as follows:
  - High Option — Up to 365 days each hospital confinement.
  - Low Option — Up to 30 days each hospital confinement.
- Intensive Medical Care — Services performed by a physician which require time and study in addition to the usual in-hospital care. Benefits are payable, *under High Option only*, for a patient eligible for in-hospital medical care.
- X-ray Examinations (with film) — For a hospitalized bed patient; or when performed in the outpatient department of a hospital or in a physician's office for and within 72 hours after accidental injury or in connection with minor surgery.
- Emergency First Aid Treatment of Accidental Injury — When provided within 72 hours after an accidental injury and for which no other Basic Surgical-Medical Benefit is payable.
- Physiatry — When furnished to a hospitalized bed patient by a physician other than the attending physician, while the patient is eligible for in-hospital medical care benefits.
- Laboratory and Pathological Examinations — For a hospitalized bed patient;

or when performed for, and within 72 hours after, accidental injury; or when performed in the out-patient department of a hospital, or in a physician's office, in connection with minor surgery.

—Removal of Casts and of Sutures for Lacerations.

#### Maternity Benefits—

The wife enrolled under family coverage is eligible for benefits for any condition incidental to or resulting from pregnancy.

#### *For Delivery (Other Than Cesarean)*

Allowance will be provided for the services of the attending physician and the administration of anesthetics when performed by a physician, other than the attending physician or his assistant, who customarily bills for his services.

#### *For Cesarean Delivery and Complications of Pregnancy*

Both High and Low Options provide regular Basic Hospital Benefits, Basic Surgical-Medical Benefits, and Supplemental Benefits (see below) for cesarean delivery and complications of pregnancy.

#### Paid-in-Full Benefits—

Under the High Option Paid-in-Full Benefits apply to all covered services (even though supplemental coverage is available) *except* the following:

- Obstetrical delivery
- Diagnostic X rays
- Laboratory and pathological examinations
- Physiatry
- Electro-shock therapy

#### Basic Blue Cross Hospital Benefits—

Under the High Option covered hospital services are provided for up to 365 days of care for each hospital confinement.

The Low Option Contract provides for up to 30 days of care for each hospital confinement.

Covered hospital services are those furnished by the hospital to an inpatient and billed for as regular hospital service.

#### Supplemental Benefits—

Blue Cross and Blue Shield also provide Supplemental Benefits for covered medical expenses that are reasonable, customary and necessary charges incurred by a subscriber which are in excess of those for which benefits are provided under the Basic portion of the contract when the services and supplies are performed or prescribed by a physician. The maximum Supplemental Benefits payable for each subscriber are:

|                   |          |
|-------------------|----------|
| High Option ..... | \$30,000 |
| Low Option .....  | \$10,000 |

#### *Coinsurance*

The Plan will pay 80% under the High Option or 75% under the Low Option of charges for covered services and supplies in excess of a Deductible within a single Benefit Period. The Benefit Period is the calendar year beginning on January 1 and ending on December 31 of each year.

#### *Deductible*

The Deductible is \$100 (High Option) and \$150 (Low Option) for each subscriber each Benefit Period. Under a family enrollment covering three or more subscribers, only two Deductibles have to be satisfied during any calendar year. The Deductible and the above maximums (High Option — \$30,000, Low Option — \$10,000) apply only to Supplemental Benefits.

#### *Services and Supplies Covered Under Supplemental Benefits*

- Physicians' services, including surgery, home, office, and hospital visits and consultations
- Hospital services — up to \$25 a day (High Option) or \$15 a day (Low Option)
- Anesthetics and their administration
- Blood transfusions, including the cost of blood and blood plasma except when donated or replaced, and blood plasma expanders
- Radiation therapy
- Diagnostic examinations, including X ray, laboratory, basal metabolism, electrocardiogram, electroencephalogram, and radioisotope
- Local professional ambulance service to

or from a hospital for inpatients, or for outpatient accident care

- Physical therapy rendered by a qualified professional physical therapist
- Orthopedic braces (except corrective shoes), crutches, and prosthetic appliances such as artificial limbs and eyes, including their replacement, repair, or adjustment
- Rental of wheelchair and other durable medical equipment
- Drugs and medicines obtainable only by written prescription
- Services of special nurses as follows:

*In a hospital* — Services of a professional registered nurse (RN) or a licensed practical nurse.

*Outside a hospital* — Service of a professional registered nurse only; except that under unusual circumstances, and upon written certification by the attending physician that the services of a professional registered nurse were necessary but unobtainable, Nebraska Blue Cross-Blue Shield may determine that the services of a licensed practical nurse are covered services.

#### *Special Benefit Provisions for Diagnostic Procedures Not Covered by Basic Benefits*

To the extent that they are not covered by Basic Benefits, Supplemental Benefits of 80% (High Option) or 75% (Low Option) will be paid for charges in excess of \$20 (High Option) and \$25 (Low Option) incurred during a single Benefit Period for the following services in a hospital, in a physician's office, or elsewhere:

- X-ray examinations
- Laboratory examinations (except allergy tests and surveys)
- Basal metabolism examinations
- Electrocardiograms
- Electroencephalograms
- Radioisotope examinations

These benefits are paid regardless of whether the subscriber has satisfied the Deductible. The \$20 (High Option) or \$25 (Low Option) payable by the subscriber may be used to help satisfy the \$100 (High

Option) or \$150 (Low Option) Deductible. If the \$100 (High Option) or \$150 (Low Option) Deductible has already been satisfied at the time the subscriber receives a service for which the special benefit is payable, Supplemental Benefits will be paid for the charges including the first \$20 (High Option) or \$25 (Low Option).

#### **When Reporting Services to Nebraska Blue Cross-Blue Shield—**

Use the regular Nebraska Blue Shield medical report form when reporting care rendered to patients enrolled under the Federal Employees' Contract. Each "FEP" subscriber has a special Identification Card on which the Certification Number is preceded by the letters "R0." When you see these letters, you can be sure the patient is enrolled under the Federal Employees' Contract. There is also a code on the reverse side of the "ID" Card indicating whether the patient is enrolled under the High or Low Option.

#### *Filing for Supplemental Benefits*

To obtain Supplemental Benefits, the member should complete a Supplemental Claim Form (available from his agency, or the local Blue Cross or Blue Shield office), and attach itemized bills for all covered medical and hospital expenses not paid for under Basic Benefits. Canceled checks or cash register receipts will not be accepted in lieu of itemized bills. Itemized bills must show name and address of purveyor of services, name of patient, date of service, type of service, and charge for each service.

Prescription drug and medicine bills must show the prescription number.

Bills for services of special nurses must show that the nurse is a registered nurse (RN) or a licensed practical nurse (LPN).

Supplemental benefit claim forms should be filed directly by the member to their local Blue Cross-Blue Shield office.

Under the federal program, claims should be filed with the local Blue Cross-Blue Shield office serving the area where service is rendered. All services rendered in Nebraska should be filed with Nebraska Blue Cross-Blue Shield. All services rendered outside Nebraska should be filed with the plan serving that area.





# Books



**"Physiologic Foundations for Marriage Counseling"** by Joseph B. Trainer, MD. Published June 14, 1965 by the C. V. Mosby Company of St. Louis. 287 pages (7" x 10"). Price \$8.00.

The author is Associate Professor of Physiology and Medicine and Director of the Health Services at the University of Oregon Medical School in Portland, Oregon. He has written a book which provides solid information on the biology and medical aspects of sex, marriage, and reproduction. The topics taken up attempt to include all of the major problems people may have to deal with in the course of marriage. Therefore this book goes from the physiology of sex to the essential qualities that the human brings to the association. It deals with the related problems of contraception, infertility, and abortion. It introduces the potential problems of development and genetics. It incorporates much solid information into a philosophic consideration of manners, morals, and customs.

At this time we have the paradox of having newsstands loaded with paper-back books dealing with marriage and sex, while at the same time authoritative, professional books covering these subjects are hard to find. Your review editor takes pleasure in recommending this book to all medical students and nursing students — and to all physicians who are called upon for advice about sex and marriage. This is a very practical book and an excellent one.

**"Surgery of the Parotid Gland"** by Robin Anderson, MD, and Louis T. Byars, MD. Published June 16, 1965 by the C. V. Mosby Company of St. Louis. 177 pages (7" x 10") with 127 illustrations. Price \$12.75.

Doctor Anderson is Head of the Department of Plastic Surgery at The Cleveland Clinic Foundation, Cleveland, Ohio. Dr. Byars is an Associate Professor of Clinical Surgery at the Washington University School of Medicine in St. Louis, Missouri. Their book is based upon the observation and treatment of more than 600 patients with parotid gland disease over a period of twenty-five years.

Few texts about surgery of the parotid gland are available. The subject in general is confused and full of controversial aspects. For example, there is considerable misunderstanding about the possibility of spontaneous regeneration of the facial nerve and the value of facial nerve grafts.

This book, which is written particularly for the surgeon, will replace much of the confusion with an orderly and authoritative approach. Chapters of special interest include a section on the place of radiation therapy and a section on complications of surgery and secondary reconstruction.

**"Anatomy and Surgical Technique of Groin Dissection"** by John S. Spratt, Jr., MD; William Shieber, MD, and Burl M. Dillard, MD. Published July 23, 1965 by the C. V. Mosby Company of St. Louis. 97 pages (7" by 10") with 37 illustrations. Price \$9.75.

The authors are all on the teaching staff of The Washington University School of Medicine in St. Louis, and they have all been on the staff of the Ellis Fischel State Cancer Hospital in Columbia, Missouri. Their book is divided into the following three parts:

1. Anatomy of the Ilioinguinal Region
2. Surgical Technique of Groin Dissection
  - Preparation of the patient
  - Preoperative lymphography
  - Surgical techniques
  - Postoperative care
3. Indications for Groin Dissections
  - Population characteristics
  - End results
  - Adverse effect of removing cancer-free nodes?
  - Occult metastases
  - Therapeutic or prophylactic groin dissection?
  - Test for therapeutic groin dissection
  - Test for prophylactic groin dissection

This valuable monograph is based upon cases collected over the past 25 years.

**"Textbook of Obstetrics"** by John C. Ullery, MD, and Z. J. R. Hollenbeck, MD. Published June 15, 1965 by the C. V. Mosby Company of St. Louis. 752 pages (7½" x 10½") with 292 illustrations. Price \$17.50.

Doctor Ullery is Chairman and Professor of Obstetrics and Gynecology at The Ohio State University College of Medicine. Dr. Hollenbeck is a professor in the same department. Aided by 31 of their colleagues they have prepared a concise but adequate presentation of the proper management of the pregnant patient from conception through involution.

Whereas the general philosophy and specific methods described are widely accepted in this country and are integral parts of the curricula of most medical schools, they represent primarily those currently in use at The Ohio State University College of Medicine.

Gynecologic problems in diagnosis and treatment are presented as they relate to obstetricians. Practicing physicians and medical students will find this a very useful addition to their library.

**"How Physicians Think — An Analysis of Medical Diagnosis and Treatment"** by Emanuel Goldberg, MD. Published June 1, 1965 by Charles C. Thomas of Springfield, Illinois. 182 pages (6" x 9"). Price \$7.50.

The author is an Attending Physician at Montefiore Hospital and Medical Center in New York City. He has been a Lecturer in Medicine at Columbia University. In this book he emphasizes that diseases are abstractions and therefore not real . . . that there are no diseases but only patients. He shows the practical value of thinking about patients in terms of syndromes rather than diseases. He describes a simple means of describing all patients in terms of their functional, structural, and behavioral changes. When this is done, the arbitrary separation of patients into "somatic diseases," "psychosomatic diseases," and "mental diseases" disappears.

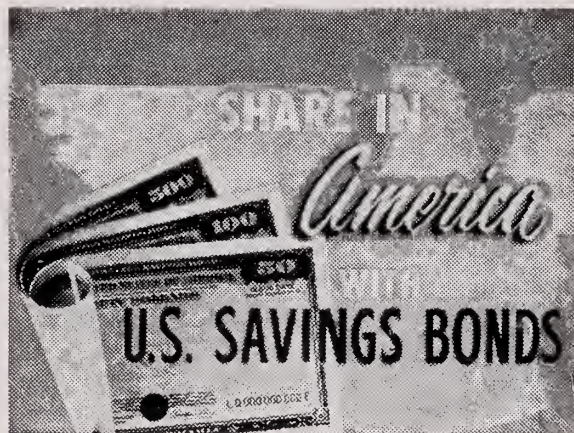
The effectiveness of placebos, the importance of faith, and even the meaning of the symptom of pain are explained.

**"Physical Examination of the Joints"** by W. P. Beetham, Jr., MD; Howard F. Polley, MD; C. H. Slocumb, MD, and Walt F. Weaver, MD. Published June 17, 1965 by the W. B. Saunders Company of Philadelphia. 198 pages (6½" x 9½") with 127 illustrations. Price \$7.50.

This monograph is intended for physicians and students who wish an elementary, comprehensive

guide for conducting the physical examination of joints and for evaluating involvement of the joints in the various rheumatic diseases. The technics of examination are described in detail, as the ability to perform the joint examination accurately is helpful and in most instances essential for establishing the correct diagnosis. The available medical literature has been correlated with the experiences and concepts of the authors and other consultants in rheumatology at the Mayo Clinic. At the end of each section describing the examination of a particular joint, a list of references is supplied for those who may desire additional information.

This is a very practical book that many of our readers will find extremely useful.



## ORGANIZATIONS, NATIONAL

### American Academy of General Practice

Mr. Mac F. Cahal  
Volker at Brookside  
Kansas City 12, Missouri

### American Academy of Pediatrics

E. H. Christopherson, Secy.  
1801 Hinman Ave.  
Evanston, Illinois

### American College of Legal Medicine

Glenn W. Bricker, M.D., F.C.L.M., Secretary  
1003-06 Medical Tower  
Philadelphia 3, Pennsylvania

### American College of Obstetricians & Gynecologists

Craig W. Muckle, M.D.  
1806 Garrett Road  
Lansdowne, Pa.

### American College of Physicians

Edward C. Rosenow, Jr., M.D., F.A.C.P., Secy.  
4200 Pine St.  
Philadelphia 4, Pennsylvania

### American College of Radiology

Mr. W. C. Stronach  
20 North Wacker Drive  
Chicago 6, Illinois

### American College of Surgeons

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40 East Erie Street  
Chicago 11, Illinois

### American Diabetes Association

Laurentius O. Underdahl, M.D.  
1 East 45 Street  
New York 17, New York

### American Heart Association

Mr. Rome A. Betts, Secy.  
44 East 23rd Street  
New York 10, New York

### American Hospital Association

Edwin L. Crosby, M.D., Director  
840 Lake Shore Drive  
Chicago 11, Illinois

### American Society of Anesthesiology

Mr. J. W. Andes  
515 Busse Hy.  
Park Ridge, Illinois

### American Society of Internal Medicine

Mr. Albert V. Whitehall, Executive Secy.  
3410 Geary Boulevard  
San Francisco 18, California

### The American Society of Clinical Pathologists

Miss Eleanor F. Larson  
445 Lake Shore Drive  
Chicago 11, Illinois

### American Medical Association

F. J. L. Blasingame, Executive Vice Pres.  
535 North Dearborn Street  
Chicago 10, Illinois

### Arthritis and Rheumatism Foundation

Floyd B. Odum, Chairman  
10 Columbus Circle  
New York 19, New York

### International College of Surgeons

John B. O'Donoghue, M.D.  
1516 North Lake Shore Drive  
Chicago 10, Illinois

### National Multiple Sclerosis Society

257 Park Avenue South, New York 10, N.Y.



## ORGANIZATIONS, STATE

**Alcoholics Anonymous**  
1345 N Street, Lincoln

**American Red Cross**  
W. J. Frenzel, State Representative  
2631 Garfield, Lincoln

**Cerebral Palsy Association of Nebraska**  
Mrs. Ben H. Cosdery  
201 South Elmwood Road, Omaha

**Creighton University School of Medicine**  
Richard Egan, Dean  
302 North 14th, Omaha, Nebraska

**International College of Surgeons**  
James J. O'Neil, M.D., Regent for Nebraska  
612 Medical Arts Building, Omaha 2, Nebraska

**Multiple Sclerosis Society**  
Mrs. Harold Stoehr, Executive Secretary  
3648 Folsom Street, Lincoln, Nebraska

**Muscular Dystrophy Society**  
Mrs. Marvin Traeger, President  
Fairbury, Nebraska

**National Foundation, Inc.**  
Clinton Belknap  
State House Station  
Post Office Box 4813, Lincoln, Nebraska

**Nebraska Chapter,  
Arthritis and Rheumatism Foundation**  
Lloyd E. Skinner, President  
Box 2, Elmwood Station, Omaha 6, Nebraska

**Nebraska Association of Pathologists**  
Dr. Robert A. Brooks, Secy.-Treas.  
1403 Sharp Building, Lincoln, Nebraska

**Nebraska Blue Cross-Blue Shield**  
Wm. H. Heavey, Executive Director  
518 Kilpatrick Building, Omaha, Nebraska

**Nebraska Chapter  
American Academy of General Practice**  
John A. Brown, M.D., Secy.  
402 Lincoln Liberty Life Bldg., Lincoln, Nebraska

**Nebraska Chapter  
American College of Physicians**  
Henry J. Lehnhoff, Jr., MD, Governor for Nebr.  
720 Doctors Building, Omaha, Nebraska 69131

**Nebraska Chapter  
American College of Surgeons**  
Robert W. Gillespie, MD, Secy.-Treas.  
500 South 17th St., Lincoln, Nebraska

**Nebraska Chapters  
National Cystic Fibrosis Research Foundation**  
Greater Omaha Chapter  
Miss Betty Seibert, 510 South 42nd St., Omaha  
Lancaster County Chapter  
Mr. and Mrs. Gayle Voller, 530 North 75th St.,  
Lincoln

**Nebraska Dental Association**  
D. W. Edwards, D.D.S., Secy.  
1220 Federal Securities Bldg., Lincoln, Nebraska

**Nebraska Diabetes Association**  
J. William Hervert, M.D., President  
Mr. Tom Skillman, Secretary  
7611 Lawndale Drive, Omaha, Nebraska

**Nebraska Dietetic Association**  
Barbara Holvick, President  
26th and Dewey, Omaha

**Nebraska Division American Cancer Society**  
Ray E. Achelpohl, Executive Director  
4201 Dodge, Omaha, Nebraska

**Nebraska Heart Association**  
Paul S. Archambault, Executive Director  
514 South 40th Street, Omaha 5, Nebraska

**Nebraska Hospital Association**  
Stuart Mount, Executive Director  
1335 "H" Street, Lincoln, Nebraska

**Nebr. Academy of Ophthalmology & Otolaryngology**  
C. Rex Latta, MD, Secretary  
710 Doctors Building, Omaha, Nebraska 68131

**Nebraska Pediatric Society**  
Otto G. Rath, Secretary  
3929 Harney, Omaha

**Nebraska Pharmaceutical Association**  
Miss Cora Mae Briggs, Executive Secretary  
1001 Anderson Building, Lincoln 8, Nebraska

**Nebraska Psychiatric Institute**  
602 South 44th Avenue, Omaha

**Nebraska Public Health Association**  
George R. Underwood, M.D., President  
935 "R" Street, Lincoln, Nebraska

**Nebraska Radiological Society**  
Jack Zastera, M.D., Secy.-Treas.  
816 Medical Arts Bldg., Omaha, Nebraska

**Nebraska Rheumatism Association**  
Vernon G. Ward, President  
5 West 31st Street, Kearney, Nebraska

**Nebraska Society for Crippled Children**  
S. Orson Perkins, Director  
402 South 17th, Omaha, Nebraska

**Nebraska Society for Internal Medicine**  
Robert S. Long, M.D., President  
8721 Shamrock Road, Omaha, Nebraska

**Nebraska Society of Anesthesiologists**  
Frank Cole, M.D., President  
2430 Lake St., Lincoln, Nebraska

**Nebraska Society of Medical Technologists**  
Gladys Jeurink, MT, ASCP, 4600 Spruce, Lincoln

**Nebraska State Department of Health**  
E. A. Rogers, M.D., Director  
State Capitol Building, Lincoln, Nebraska

**Nebraska State Medical Association**  
Ken Neff, Executive Secy.  
1315 Sharp Building, Lincoln 8, Nebraska

**Nebraska State Nurses Association**  
Mrs. Zelda Nelson, Executive Director  
510 Securities Building, Omaha, Nebraska

**Nebraska State Obstetric and Gynecologic Society**  
W. Riley Kovar, M.D., Secretary-Treasurer  
3610 Dodge Street, Omaha 31

**Nebraska State Orthopedic Society**  
Harold Horn, MD, Secretary  
3145 "O" Street, Lincoln, Nebraska

**Nebraska State Pediatric Society**  
Otto Rath, M.D., Secretary-Treasurer  
3929 Harney, Omaha, Nebraska

**Nebraska Tuberculosis Association**  
Delmer Serafy, Executive Secy.  
406 W.O.W. Building, Omaha, Nebraska

**Nebraska Urological Association**  
Louis W. Gilbert, MD, Secretary-Treasurer  
903 Sharp Building, Lincoln 8, Nebraska

**Omaha Mid-West Clinical Society**  
1040 Medical Arts Building (68102)  
Rita M. Crowell, Executive Secretary

**POISON CONTROL CENTER**  
Children's Memorial Hospital  
502 South 44th, Omaha, Nebraska

**University of Nebraska College of Medicine**  
Cecil L. Wittson, MD, Dean  
42nd and Dewey, Omaha, Nebraska

(Please help us keep these addresses correct, by notifying the Editor of any changes).



## THE NEBRASKA STATE MEDICAL JOURNAL

## THE MAGIC OF A NAME

There may be at least nine different kinds of names for drugs. There is the chemical name, which identifies it absolutely; it tells us what is in the molecule and how the elements are arranged. The chemical name is far too unwieldy to be used verbally and even, excepting in chemical literature, in medical writing. So a second name, the generic name, came into being; it is simpler, it is a coined name, and is sometimes a shortened form of the chemical name. A third kind is what is called the common name, and is simply the generic name. A fourth name is the trademark name, the name under which a company markets the product as a medicine. A fifth phrase, the trade name, is the trademark name. So is the sixth version, the brand name. A seventh form is the nonproprietary name, which is the generic name. The eighth kind of name is the official name, as it is listed in the U.S.P. And a drug's ninth name is what is known as an official synonym, as aspirin.

The number of drugs increases with time. Each one acquires two names, generic and trademark. Inventing new and pleasing names has become more and more difficult; the problem has even been turned over to computers. But which form shall we use?

For older drugs and alkaloids, as morphine and atropine, there is no problem. But for most newer agents, a decision must be made. There is one argument for generic, and that is price. There is another, probably of less importance, and that is the duplication of trademark names marketed by different companies. But there are three arguments for trademark. In the first place, a company has invested a great deal of money to develop a drug, and wants properly to recover its investment. And the second reason commonly given is that to take advantage of a situation that may or may not exist, by buying drugs at bargain prices, would stifle research. A third argument offered is to the effect that not all chemically identical drugs are identically pure or identically po-

tent. Indeed, when a prescription contains a generic name, it is still incumbent on the pharmacist to dispense a drug he knows to be of the highest quality. Shall we give our patients the cheapest? Is it through no accident that cheap has come to mean inferior as well as inexpensive? When a reputable and well-known house puts its name on a product, it has added something to it, and what may be its most important element. If we could be sure that our patients could get the same medication and save money while doing it, other arguments might not carry the day. But if there is a difference, then it is well worth it.

—F.C.

MEDICARE, BLUE SHIELD, AND  
THE AMA

The nation's Blue Shield Plans have been encouraged by the American Medical Association to play an important role in the administration of the physician services portion of the new Medicare Law.

A statement was issued by the AMA in response to a request for guidance by the National Association of Blue Shield Plans on the part member Blue Shield Plans should take in the administration of the supplementary medical insurance program of PL-89-97, the new Medicare Law.

The statement, which was approved by the Trustees on August 14, said:

"The Supplementary Medical Insurance Program of the Medicare Law (PL 89-97) calls for voluntary medical insurance plans, group health plans, and private insurers to enter into contracts with the government to provide specified administrative functions. It has been indicated by the Department of Health, Education, and Welfare that Blue Shield Plans will be among those carriers called upon to enter into contracts to administer the program.

"The Board of Trustees of the American Medical Association encourages Blue Shield

Plans and the National Association of Blue Shield Plans to assume an important role in the administration of the medical-surgical portion of the medicare program."

In commenting on the AMA statement, John W. Castellucci, Executive Vice President of the National Association of Blue Shield Plans, observed:

"It is apparent that Blue Shield should play a role in the medical-surgical portion of the Medicare Law for three reasons: (1) Blue Shield is an important factor in medical prepayment with some 56 million members, including five million aged; (2) Blue Shield has the active participation of more than 150,000 practicing physicians; (3) it would take a strong carrier with long established relationships with both physicians and patients to administer this program.

"At the same time, Blue Shield has sought advice from the American Medical Association on the role it should play. The statement by the AMA Board of Trustees encouraging Blue Shield to play an important role clarifies our future actions.

"Representatives of the National Association of Blue Shield Plans will act accordingly when they meet with the Social Security Administration on August 18 to discuss Blue Shield's participation in the Medicare program."

These are not only trouble times, they are curious, interesting, and exciting times. They are times for discussion, for decision, and for being informed. The action of the Board of Trustees of the AMA in this connection is noteworthy. In the meantime, a National AMA Meeting on Medicare, its current status and regulations, has been rescheduled for October 1, in the Ballroom of the La Salle Hotel in Chicago, Illinois. And a Special Convention of the House of Delegates has been called and will be held on October 2 and 3, 1965, in the Red Lacquer Room of the Palmer House in Chicago. All AMA members are welcome to attend open or closed House meetings.

—F.C.

## WHAT FOOLS WE MORTALS BE

The need for recognition is demanding and, like the hunger and thirst of Tantalus, one that will not be gratified. It is sometimes the overintense desire to excel and therefore to be different, while it may with equal logic become the craving to belong and thus to conform. There is hardly a facet of our lives that it does not touch. It has given rise to words and concepts like prestige, image, and status. It influences our daily and hourly conduct, in business and extracurricular, and governs our dress and table. To show or to pretend that we were wealthy, we have cultivated pallor and elsewhere let our nails grow long. Genteelism required visible proof that one did not labor in the fields, and a pale skin was once the hallmark of beauty among English women. Logic and rationalizing are strange bedfellows; wealth is now displayed by tanning of the skin, which proves in some way that one has naught to do all day and that the expense of travel is of no importance. Two sorts of nonsense intrude on us as we witness this phenomenon. At first we cannot but be impressed with the zeal with which so large a part of our society spends its daylight hours in this unbelievable pursuit. Following this, there is the evidence expressed by medical authorities of the harmful effects of the sun's rays. And finally, there is the curious delusion expressed by devotees of this sport that tanning a pale skin is beneficial, and by this they mean only that pale people are anemic and that lying in the sun somehow increases the level of hemoglobin. Illogic has gone from burn and cancer to anemia, but motivation remains as it was. One minds little of this wooly thinking until we hear the tanned individual tell the pale person he needs to get out in the sun more. Who remembers pink pills for pale people?

Patients used to come to the hospital days, or even weeks, before their operations. Now they come in the day before. But it is becoming increasingly difficult to find them. They get to the hospital later than they were told to, they go to the bathroom as soon as they come (or just as the doctor arrives), they depart for the X-ray department, or



they leave for the laboratory. They are commonly admitted to the self-care unit, only to wander about, to the nearest (or farthest) telephone, to the sun porch, or to visit in other patients' rooms. They sometimes decide to come in in the morning, and they frequently change rooms (sometimes several times) when they finally arrive. They are on occasion found only just before leaving for the operating room, and once in a while after getting there. It used to be so easy to find them. You just went to their rooms, and there they were.

I have always felt comfortable when a patient whom I have treated was turned over to the care of a hospital staff nurse. The special nurse was someone I did not know; her service did not represent an improvement over standard hospital care. When a patient had a "special," the ward nurses usually left nurse and patient alone, as though the latter were not in the hospital. The special nurse has too often been a prestige symbol, too much used by those whose need was for status and not for treatment. Now that we have round-the-clock nursing attendance in the intensive care facility, I feel even more so. The special nurse has sometimes been a companion and frequently sent on errands beneath the level of her training and perhaps her ability. Where there is an ICF, that is obviously the place for anyone whose condition makes 24-hour nursing care mandatory. Indeed, when there is a shortage of nurses, it is an unfortunate waste to see a special nurse taking care of only one patient, and more often than not, a not very sick one.

Perhaps we have not always been right. We were opposed to the rounding of the car tops (remember the old telephone booths on wheels?), to electric can openers, and to automobile air conditioners. Now we wonder how we ever got along without them. But when I use my ultramodern electric can opener, I notice that just before the end of the ceremony, a little liquid comes out of the (I can only suppose sterile) can, floats over the obviously unsterile outside of the can cover, and then falls back into the can, where it will become part of my lunch. Our stove is a masterpiece of modern engineer-

ing; so is the can opener. But I keep thinking about that little bit of liquid that floats on the outside of the cover and falls back into the can, and I feel "chilly and grown old," not modern. And I look for a can opener. The old kind.

Those of us who make early morning rounds or who find ourselves in the hospital in the middle of the night when sensible people are home and asleep have witnessed, not always, but often enough to marvel, that wonderful phenomenon, the flowers in the hall. Why we bring flowers to the sick is an interesting enough problem, all by itself. By why they are removed from patients' rooms is a nuttier problem, and the answers are even better. I have been told by flower movers that the rooms are crowded, as though they expanded during the day, only to shrink at night. I have been informed that the scent becomes overpowering when the sun goes down. I have heard that patients request nocturnal flower removing. I am inclined to doubt this or at best to assume that patients have become indoctrinated to the point where they feel, without knowing why, that something dangerous and mysterious will happen if it is not done, and that they are being neglected. I have been solemnly instructed that it is good for the plants. And of course an older flower mover will remember what may have been the original excuse (I almost said reason): the foible of floral physiology. They take in carbon dioxide during the day, but when night falls, they change all this and remove dangerously large amounts of oxygen from the room and exude equally dangerous amounts of carbon dioxide. Well, visitors and maids and nurses, and doctors making early morning rounds, also remove oxygen from the room and exhale carbon dioxide, and I cannot think that a flower is more dangerous than a physician. The funniest part of flower moving is that if you ask four different movers why they do it, you will get four different answers. But it is something that seems destined to go on without end. Perhaps not. It may be something like the universally held belief that tomatoes were poisonous, until someone, bolder than the rest, ate one in public, with relish and with-



out harm. Tonight I shall sleep with a flower in my room. And if no harm comes to me (if I am undone by a devilish daffodil or a clever carnation, those who read this will know what has happened to me), I may increase the number to six, and if I can afford it, to a dozen. We may even have a report of this experiment in a later issue. As soon as we get a government grant.

—F.C.

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## Current Comment

### Open Abdominal Biopsy Just Before Thoracotomy for Lung Cancer?—

J. W. Bell, MD of the University of Washington School of Medicine points out the advisability of an abdominal laparotomy through a small upper midline incision, carried out under the same general anesthetic, and done just before the anticipated thoracotomy. In his series of 85 patients, occult abdominal metastases were found in 16 patients. His proposed procedure would be done whenever there was a negative scalene node biopsy.

He states that of those patients considered for surgical treatment, nearly one fourth will already have extrathoracic metastases in the scalene nodes or upper abdomen, and in this group the opportunity for even a palliative pulmonary resection is small, the longevity is approximately six months, and thoracotomy is contraindicated. (Geriatrics, September, 1965).

### Studies of Prematures Given Erythromycin Estolate — L. Burns and J. Hodgman. Amer J Dis Child 106:280 (Sept.) 1963.

Eighty-seven premature infants aged 1-42 days and weighing 860-2,460 gm were given erythromycin estolate orally to evaluate their response to the drug. Absorption was rapid, therapeutic serum levels being obtained within 1-2 hours. Satisfactory serum levels were maintained in the infants during eight days of medication, with no evidence of accumulation. The serum levels were similar regardless of the gastric

pH, age, or birth weight of the infant. There was no demonstrable toxicity or development of abnormal liver function tests during 2 weeks of therapy. Premature infants can be successfully treated for infections caused by organisms susceptible to erythromycin estolate with a dosage of 10 mg/kg every 6 hours, orally, for 14 days.

### Prognostic Value of High Ten-Minute <sup>131</sup>I Uptake in Nontoxic Goiters — H. P. Higgins et al (St. Michael's Hosp, Toronto), Canad Med Assoc J 91:689 (Sept. 26) 1964.

Forty-two patients with nontoxic goiter and a high ten-minute uptake of radioactive iodine <sup>131</sup>I were treated with 100 ug of liothyronine per day for periods up to 35 months. All the goiters were reduced in size and 60 showed marked regression within one week. Hashimoto's disease was considered an unlikely cause of these goiters because only four of 20 tested had positive antithyroglobulin tests and these were of low titers (up to 1-81). Chromatographic studies suggested a defect in thyroxine metabolism in many of the patients. It was concluded that a high ten-minute uptake test was useful in predicting a response to therapy and in selecting patients likely to have a detectable defect in thyroxine metabolism.

### Critical Evaluation of Results of Lumbar Sympathectomy in Treatment of Intermittent Claudication — D. E. Strandness, Jr. (V.A Hosp, Seattle), and J. W. Bell. Ann Surg 160:1021 (Dec.) 1964.

A clinical and plethysmographic evaluation of lumbar sympathectomy in the treated. The study program consisted of pre- and post-operative evaluation of: (1) the digit volume pulse, (2) ankle blood pressure, (3) sympathetic activity, and (4) physiological response to exercise. Of the 39 extremities only five were improved. There was no correlation between changes in digit blood flow or ankle pressures and results. Return in sympathetic activity occurred in 12 of the 39 denervated legs. The abnormal shunting of blood away from the distal extremity during exercise was not reversed by sympathectomy.

# Lactic Dehydrogenase

LEVELS *in*

## Pernicious Anemia\*

**L**ACTIC dehydrogenase is an enzyme of the glycolytic cycle. It can be measured spectrophotometrically by measuring the rate at which it catalyses the conversion of pyruvate to lactate. Diphosphopyridine nucleotide (DPN) is used as the coenzyme that undergoes an oxidizable-reduceable reaction. Berger and Broida<sup>1</sup> have developed a colorimetric method of assay, and it is this method that is used in the determinations in this paper. Normal serum values by this method are 100-350 BB units with a borderline of 350-550 BB units.

The use of lactic dehydrogenase (LDH) determinations as an aid in the diagnosis of various disease entities has been under investigation for the past ten to twelve years. Its use, along with serum glutamic-oxalate transaminase determinations (SGOT), in diagnosing myocardial infarctions is well known.

Elevation of serum LDH in pernicious anemia was first observed in 1955 by Hess and Gehm. Values of five to twenty-one times normal were reported.<sup>2</sup>

Gordon and Enari reported the serum LDH was high in relapse of pernicious anemia and fish tape-worm anemia and that the levels decreased under treatment as the reticulocyte count went up. They reported values between 4900 and 18,000 units in pernicious anemia. Other megaloblastic anemias were reported in the range of 334-850 units: one atypical pernicious anemia, two nutritional anemias, and one malabsorption syndrome. A case of pernicious anemia treated by prednisone was cited and it was shown that the LDH returned to normal as the reticulocytes went up but that the B<sub>12</sub> levels still were low. It was suggested that the normalization of the LDH activity was not due to the rise in the serum B<sub>12</sub> but was

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due to the changes in the bone marrow, irrespective of the type of therapy employed.<sup>3, 4</sup>

Gronvahl reported values of LDH in pernicious anemia ranging from 300 to 15,900 units with a mean of 5360 units. Values in hemolytic anemias varied from 140 to 1770 with a mean value of 575 units. He concluded that the deviation from normal was greatest when the hemoglobin value was lowest. Also that the values in pernicious anemia were generally higher than in other hemolytic types of anemia. He stated that values of 3000 units or over were pathognomonic for B<sub>12</sub> deficiency but that deviations were only present in advanced states. If the red cell count is only slightly low there is only moderate or no rise in the LDH value.<sup>5</sup>

The serum concentration of the enzyme depends on the ratio of inflow and diminution of the enzyme in the serum. This varies due to accelerators and inhibitors. The probable cause of elevated LDH in B<sub>12</sub> deficiency is not only hemolysis but is also due to severely disturbed cellular function with shortened survival time within the bone marrow or in other tissues. Possibly B<sub>12</sub> deficiency results in slower elimination of LDH from the serum.<sup>5</sup>

The site of hemolysis in pernicious anemia was suggested to be in the bone marrow in contrast to extravascular hemolysis in the other types of hemolytic anemias.<sup>6, 7</sup>

Heller, Weinstein, West, and Zimmerman<sup>8</sup> suggested that the release of LDH into the plasma does not depend merely on cell necrosis but also on other factors; especially

\*Presented before Omaha Mid-West Clinical Society, 31st Annual Session, October 30, 1963.



proliferative action of abnormal cells, alteration of surface potentials, and the molecular size of enzyme proteins. The same authors reported values of LDH up to 60 times normal in some cases of pernicious anemia.<sup>9</sup>

Williams and Spencer<sup>10</sup> reported the following values of LDH in a study of various disease entities, both medical and surgical, and suggested that a markedly elevated LDH was characteristic of bowel necrosis.

With the above serving as an historical background, the following cases from the

#### SERUM LDH LEVELS<sup>10</sup>

|                                     |           |
|-------------------------------------|-----------|
| Renal Infarct                       | 1640-1700 |
| Ca of Lung                          | 600- 980  |
| Lym Leuk                            | 580- 980  |
| Abd Carc                            | 990-1720  |
| Glomneph                            | 1340-1660 |
| Myoc Infarct                        | 600-1960  |
| Hepatoma                            | 1200-1620 |
| Hepatitis                           | 600-1080  |
| Appendicitis                        | 120- 780  |
| Cholecystitis                       | 60- 340   |
| Pancreatitis                        | 80-1200   |
| Rupt Ectopic with<br>Hemoperitoneum | 40- 880   |
| Rupt Peptic Ulcer                   | 80- 580   |
| Massive GI Bleed                    | 80- 980   |
| Int Obstruction                     | 60-1220   |
| Gangrene of Bowel                   | 500-5800  |

files of the Nebraska Methodist Hospital are presented:

#### Case 1

Female age 70, admitted July, 1961. Chief Complaints: Weakness and pallor since accident in May, 1961. Physical Findings: Pallor. No lingual or neurologic changes. Laboratory Findings: Hemoglobin, 5 gm; erythrocytes, 1.12 million; leukocytes, 3800; reticulocytes, 1.7%; platelets, 70,000. Bone marrow typical of pernicious anemia. Gastric analysis with histamine, no hydrochloric acid. Initial LDH, 14,000 BB units.

Therapy: Liver extract with 100 micrograms of B<sub>12</sub> daily.

#### Case 2

A 66-year-old man admitted August 30, 1961. History of gastroenterostomy

in 1932 for chronic duodenal ulcer. Persistent anemia since operation. Recurrence of marginal ulcer in 1944, operated upon in 1945. Tuberculous adhesions and peritonitis. Cholecystectomy in 1953. Chief Complaint: weakness for past six weeks. Physical Findings: Slight pallor; otherwise none. Laboratory Findings: Hemoglobin, 10.3 gm per 100 ml; leukocytes, 3700; anisocytosis present. Reticulocytes, 0.9%; platelets, 80,000. Bone marrow, megaloblastic. Gastric analysis, negative for acid. LDH, 6200 BB units. Treatment: Crude liver extract and B<sub>12</sub> 1000 microgm intramuscularly. Results: February, 1962, hemoglobin 13.8 gm; LDH, 380 BB units.

#### Case 3

Woman age 73, admitted April, 1962. Chief Complaint: Severe weakness and weight loss. Had received no treatment. Physical Findings: Tongue normal and neurologic examination negative. Laboratory Findings: Hemoglobin, 4.6 gm per 100 ml; red blood cells, 1.1 million; leukocytes, 6900, and showed hypersegmented neutrophils; anisocytosis and poikilocytosis were present; reticulocytes numbered 0.5%. LDH, 8000 BB units. Schilling test positive for pernicious anemia. Bone marrow was megaloblastic.

Treatment: two pints of blood initially, because of severe weakness. Then given liver extract with B<sub>12</sub>, 20 micrograms daily.

#### Case 4

Man 62 years old admitted July, 1963. Chief Complaint: Weakness for one month. Physical Findings: Pallor. Tongue was normal and neurologic examination, negative. Laboratory Findings: hemoglobin 8 grams per 100 ml; erythrocytes, 2.08 million; leukocytes, 3500; platelets, 97,000; mean corpuscular volume, 115; reticulocytes, 0.7%. Initial LDH, 2100 BB units (Sept. 13) and SGOT, 26. Bone marrow, megaloblastic, compatible with pernicious ane-



mia. Gastric analysis showed no free HCl after histamine. X rays of the upper gastrointestinal tract, negative.

*Treatment:* 500 micrograms of B<sub>12</sub> intramuscularly, daily for three days, then 250 microgm every second day until discharged.

#### Case 5

Man, age 70, admitted in September 1963. *Chief Complaints:* Tired for three months, chest pain, staggering, pain in legs. *Physical Findings:* pallor, temperature 101° F, loss of sense of position, diminished vibratory sense, hypoactive deep reflexes. *Laboratory Findings:* bone marrow megaloblastic, consistent with pernicious anemia; hemoglobin 6.7 gm per 100 ml; erythrocytes, 1.7 million, reported as hypochromic (?); reticulocytes, 0.9%; LDH 2800 BB units. X rays of upper gastrointestinal tract negative excepting a duodenal diverticulum. No gastric analysis done.

*Treatment:* 100 mcg B<sub>12</sub> on 23rd and 24th. Reticulocytes 0.5%. 1000 mcg B<sub>12</sub> Sept. 25, ascorbic acid 300 mg daily. Reticulocytes, 0.4%. On Sept. 26, reticulocytes 2.6% and on 27th, 11.8%. LDH, 1270 BB units. Sept. 28, reticulocytes, 21.4%, red cells, 1.8 million, and hemoglobin, 8.7 gm per 100 ml.

#### Case 6

Man, aged 61, admitted January, 1963. *Chief Complaints:* Intractable angina and dyspnoea. *Physical Findings:* Blood pressure 100 mm Hg systolic, 70 diastolic; tongue normal and neurologic examination, negative. *Laboratory Findings:* hemoglobin 11.3 gm per 100 ml; erythrocytes, 3.3 million and showing slight anisocytosis and macrocytosis; leukocytes, 6100. LDH, 320 BB units. Gastric analysis, no free HCl after histamine. X rays of upper gastrointestinal tract negative; of gallbladder, stones present. Electrocardiogram revealed coronary insufficiency. Schilling test positive for pernicious anemia.

*Treatment:* B<sub>12</sub> 100 mcg daily. On Jan. 28th, reticulocytes 1.3%, on 30th, 2.6%, and on 31st, 3.6%. Vitamin C, 300 mg daily, intramuscularly, added. On February 1, reticulocytes 4.5%, 2nd, 3.6%. On February 11, B<sub>12</sub> increased to 200 mcg and the vitamin C to 500 mg, intramuscularly once a week through March 22. At that time, hemoglobin value had increased to 14 gm per 100 ml, the red cells to 4.7 millions, and the reticulocytes were 0.1% on March 30th. Treatment was followed to June 21 when hemoglobin was found to be 13.5 gm. Vitamin C was then omitted through September 13, at which time hemoglobin was 12 gm.

#### Case 7

Woman, 77 years old, admitted in August, 1961. *Chief Complaints:* shortness of breath, weakness and swelling of the legs. *Physical Findings:* signs of cardiac decompensation; tongue normal and neurologic findings, negative. *Laboratory Findings:* hemoglobin, 7.8 gm per 100 ml; erythrocytes, 2.7 million; reticulocytes, 1.5%; bone marrow showed slight erythroid hyperplasia. LDH, 210 BB units. Patient had taken steroids for arthritis for three years, but none for past three months.

*Treatment:* Therapy for cardiac failure plus B<sub>12</sub> 100 mcg intramuscularly daily. After four days, reticulocytes, 3.9%. Returned to hospital in one month showing hemoglobin 6 gm, red cells, 2.75 millions. Given four transfusions and discharged with hemoglobin 10.6 gm per 100 ml. Took 100 mcg B<sub>12</sub> intramuscularly while in hospital. No followup. Diagnosis?

#### Case 8

Fifty-eight-year old woman was admitted in August, 1961. *Chief Complaints:* Tired and worn out for a year, worse the past month. *Physical Findings:* Not recorded. *Laboratory Findings:* Hemoglobin, 8 gm per 100 ml. Bone marrow, megaloblastic. *Treatment and Progress:* Given B<sub>12</sub> 200 mcg

daily for 9 days. Reticulocyte count 1.6%. Hemoglobin 8.8 gm, erythrocytes, 1.83 millions per cu mm; leukocytes, 9700, achlorhydria. LDH, 130 BB units. Upper gastrointestinal X ray, old ulcer deformity. Placed on B<sub>12</sub> 100 mcg intramuscularly, daily and folic acid 5 mg daily. Four days later, reticulocyte count, 2.1%. B<sub>12</sub> increased to 1000 mcg every two days and vitamin C 500 mg daily. Three days later, reticulocyte count, 6.0%. Questionable tarry stools in January, after which hemoglobin 11.8 gm, red cells, 3.95 millions. In the interval, hypothyroidism diagnosed. Was discharged taking iron, thyroid extract, and B<sub>12</sub>. Readmitted in August, 1962, and showed a hemoglobin of 14.4 gm per 100 ml, red cell count of 4.6 millions. She showed evidence of peripheral neuritis(?), combined sclerosis, and, later, cirrhosis of liver.

#### Case 9

Sixty-nine-year-old man admitted for bone marrow study. Hemoglobin, 7.6 gm, red cell count, 2.52 millions; LDH, 250 BB units. Bone marrow consistent with pernicious anemia. No other studies and no follow-up. ? pernicious anemia.

#### Case 10

Man, aged 78 years admitted in May, 1962. *Physical Findings*: None of significance. *Laboratory Findings*: hemoglobin 9.9 per 100 ml; red cells, 1.99 millions; leukocytes, 5100 with a smear typical of pernicious anemia. Megaloblastic bone marrow, consistent with this diagnosis. Upper gastrointestinal X-ray examination negative. LDH, 250 BB units. Reticulocytes, 0.3% rising to 1.3% after three days administration of B<sub>12</sub>. No follow-up. Previous treatment (?)

#### Case 11

A 59-year-old man was admitted in January, 1962. *Chief Complaints*: Weakness and anemia since subtotal gastrectomy in 1958. Has had trans-

fusions and taken B<sub>12</sub> since that time. *Laboratory Findings*: hemoglobin 11.9 gm per 100 ml; erythrocytes, 3.95 millions per cu mm; reticulocytes, 1.0%; LHD BB units, 250; stools, normal. Diagnosis, postgastrectomy intrinsic factor deficiency (?).

In summary, levels of lactic dehydrogenase activity in serum have been examined in eleven cases of presumed pernicious anemia admitted to the Nebraska Methodist Hospital during the past three years with the following findings:

#### Summary

Four cases of previously untreated typical "pernicious anemia" with moderate to severe anemia showed grossly elevated LDH values as reported in the literature. (Cases 1, 3, 4, and 5).

One case with only mild anemia showed marked elevation of LDH (hemoglobin 10 gm). (Case 2).

One typical pernicious anemia with only mild anemia (hemoglobin 11 gm) failed to show any LDH elevation. (Case 6).

One "possible pernicious anemia" with moderate anemia (hemoglobin 7.8 gm) had a normal LDH. ? Effect of prior therapy. ? Incorrect diagnosis (7).

One case with normal LDH eventually was diagnosed as cirrhosis (8).

One probable pernicious anemia with moderate anemia (hemoglobin 7.6 gm) had a normal LDH. (Case 9).

One typical pernicious anemia with moderate anemia (hemoglobin 9.9 gm) had a normal LDH ? prior treatment. (Case 10).

One treated postgastrectomy anemia with nearly normal hemoglobin had a normal LDH. (Case 11).

#### Conclusions

The occurrence of a grossly elevated serum lactic dehydrogenase value in an anemic patient is most suggestive that true pernicious anemia is present.

The absence of LDH elevation does not

rule out pernicious anemia in mild to moderate anemias.

The absence of LDH elevation in a severe untreated anemic state is suggestive that a diagnosis of true pernicious anemia may be in error and that other causative factors should be searched for.

Subject to an awareness of its limitations the serum LDH activity test may well be useful as a screening test in approaching the anemia problem.

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"The great challenge of medicine today and in the future is to preserve for the patient that which has made the doctor beloved while at the same time bringing to him scientific medicine . . ."  
(Robert M. Janes: *Surgery and the Teaching of Surgery: A Look Back and a Look Forward*. The J of Phi Rho Sigma 60: No. 2, November, 1964).



# The Immediate Care of Thoracic Injuries

**T**HORACIC injuries may result in slight or severe disability. Many patients with appreciable trauma have some degree of clinical shock: a falling blood pressure; rising pulse rate; rapid shallow respirations; and sweating, pallor, or cyanosis. Frequently, disturbances of normal cardiorespiratory physiology and pain, are the chief offenders in perpetuating "shock." Hemorrhage is often of secondary importance.

Immediate physical examination is of primary importance when the patient is admitted to the hospital. Correct interpretation of physical signs will allow commencement of treatment prior to an X-ray examination. It is poor practice to order an opiate, then many X rays, and merely await the interpretation of these films.

The percussion note may be normally resonant, dull (fluid), or tympanitic (pneumothorax). Shift of the trachea to the opposite side suggests pressure pneumothorax; to the same side, atelectasis. Fine rales suggest congestion, contusion, or aspiration. Rhonchi may be associated with excessive fluids in the tracheobronchial tree. Cardiac auscultation may reveal tachycardia or irregularities of rhythm suggesting cardiac injury.

Careful examination of the abdomen always should be performed on a patient with thoracic injuries. Uncomplicated thoracic trauma may be complicated by acute gastric distension which, if uncorrected, could be fatal. Immediate nasogastric tube decompression must be carried out if gastric dilatation is present.

With the start of specific resuscitative therapy as outlined below, a needle should be placed in a vein. With a continued low blood pressure, aramine or some other vasopressor may be used while awaiting plasma expanders or a cross match for transfusion. Ordinarily, prophylactic antibiotics are not used.

Anoxia may be present and may also con-

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tribute to clinical shock. The diagnosis should be made before cyanosis becomes evident since this is a relatively late manifestation. Anoxia can result in varying degrees of restlessness. This may be misinterpreted as due to pain. Opiates must be given sparingly and preferably by the intravenous route. Obviously, oxygen should be commenced in such a situation.

Actual resuscitation will be discussed as follows: (1) Relief of thoracic wall pain; (2) Correction of impaired cardiorespiratory physiology.

The steps to be described will be definitive in the vast majority of patients suffering thoracic trauma. Immediate or early thoracotomy is indicated in not over ten per cent of the civilian patients seen.

## Relief of Pain

Thoracic pain is important in perpetuating shock and may be disabling. It stifles deep respirations and may prevent necessary cough. In such circumstances, strapping of the chest has long since been discarded as inefficient and unphysiological. In our hands, a regional intercostal nerve block is far superior. The patient is placed in the lateral recumbent position with the injured side uppermost and the ribs are palpated at the edge of the erector spinae muscle. Enough nerves are injected to include at least two nerves above and two below the painful area. By means of a fine needle, a series of small skin wheals is produced over the center of each rib. A longer short bevel needle (22 gauge—1½ inch) with the bevel directed upwards is inserted through the wheal to the rib. The point of the needle is "walked" carefully to the inferior edge of the rib and advanced two to three millimeters. The intercostal vessels are never punctured by this technique.

The anesthetic agent is then injected at this site (procaine, one per cent, 5-10 cc per nerve; xylocaine with epinephrine, one per cent, 3-5 cc). Maximum safe dosages should not be exceeded (procaine — 100 cc of one per cent solution; xylocaine 50 cc of one per cent solution).

The relief from pain may be dramatic. Nerve blocks may be repeated as often as necessary, but frequently the pain relieving effects of a successful block will last for more than 24 hours and only one injection may be needed for permanent benefit.

### Cardiorespiratory Imbalance

*Impairment of thoracic wall.* Fragmentation of the sternum as well as anterior and posterior rib fractures may lead to flail segments of the thoracic wall with paradoxical respiration. If these areas are small, the paradox may be controlled by the quieting of respirations following nerve block, or the patient may be supported by positioning or adhesive strapping. In an emergency, towel clips can be inserted in a rib in the center of the flail segment and attached to weights through overhead pulleys. Steinman pins bent in S-shapes of varying sizes can also be used. When there are localized multiple fractures anteriorly, two or three Kirschner wires may be passed parallel beneath the pectoral fascia, each attached to a bale, and hooked to overhead traction. If there is complete instability, particularly bilaterally (massive crushed chest), a mechanical respirator (Bird, Bennett, Morch or Engstrom) may be necessary.

A sucking wound should be temporarily plugged with vasoline gauze after several forced expirations (to exhaust air from the pleural cavity) and resuscitation continued before taking the patient to surgery.

*Bronchial fluids.* One of the frequent results of thoracic injury is the increased fluid content in the bronchopulmonary system. These fluids may consist of edema, mucoid material, blood and serum and mucus. Fluids in overwhelming amounts constitute what we termed "traumatic wet lung" during World War II. Unless these fluids are removed, death can ensue. It is

important to distinguish this situation from pneumonia.

The most common symptom is frequent, almost continuous wet painful cough. Wheezes are prominent and rhonchi are heard constantly over one or both sides of the chest. The cough is noneffectual and the patient is usually dyspneic, restless, or cyanotic. The roentgen picture may show little.

The aim of treatment is to improve bronchopulmonary drainage. Sedative cough medicines are expressively contraindicated as are opiates unless used with great care. Pain is relieved by nerve block and voluntary cough is urged. If these measures are not effective, either tracheobronchial catheter suction bronchoscopy, or tracheostomy are indicated.

In performing tracheobronchial catheter aspiration, no topical anesthesia is required. A #16 or 18 whistle tip catheter with Y-connector and a good source of suction are necessary. The patient is placed in a semi-upright position, the neck is flexed and the tongue is pulled sharply forward to elevate the epiglottis and anchor the larynx. *Without suction*, the catheter is passed through one nostril into the region of the larynx. During deep inspiration, or the expiratory phase of cough, the catheter is rapidly advanced and sooner or later, the trachea will be entered. This will be signified by hoarseness, stridor and violent coughing. Gagging means that the catheter has curled up in the hypopharynx, or has entered the esophagus. The catheter is then quickly advanced to its fullest extent and suction applied intermittently for a few seconds as the catheter is partially withdrawn. Anoxia during this maneuver may be relieved by running oxygen through the catheter. Each main bronchus is entered by turning the head sharply to the opposite side and elevating the chin.

Bronchoscopy is a more technical procedure and more efficient, but cannot be used as frequently as catheter aspirations and often is not available. Ordinarily, topical anesthesia is necessary. In general, bronchoscopy is reserved for patients who have not been appreciably improved by catheter suction, those who have developed lobar or



total one sided obstructive atelectasis, or those in whom "aspiration pneumonitis" is suspected. Aspiration pneumonitis can be a lethal injury. I believe that any one who has vomited and aspirated should have bronchoscopy performed as quickly as possible. Frequently, actual food particles must be removed from the tracheobronchial tree. It is probably advisable in this situation to use broad spectrum antibiotics as well as bronchoscopy.

Tracheostomy is now employed widely as a means of cleansing the lower airway. In addition, there is the not inconsiderable reduction of dead space when the patient's vital reserve is low (approximately 125-150 cc). In general, tracheostomies are used almost routinely in combination head and chest trauma when the patient is unconscious, in maxillofacial injuries, in burn injuries of the airway and in any patient whose respiratory reserve is diminished because of pre-existing pulmonary or cardiac disease. Another perfectly good indication is when a severely injured patient must be handled in a hospital away from continued specialist care. In such a situation, either nurse or general physician can aspirate the tube without difficulty whereas neither may know the technique of tracheobronchial aspiration or bronchoscopy. The postoperative care is tremendously important. The catheter should always be advanced as far as possible with suction being applied only on withdrawal. For the first few days, at least, some type of constant nebulization of the inspired air or oxygen is necessary to prevent crusting and drying. The mere circulation of oxygen through the usual commercial humidifier is not sufficient.

*Intrapleural complications.* Hemothorax and pneumothorax may be important sources of cardiorespiratory imbalance. When fluid is clinically or radiologically detectable, a thoracentesis should be performed at once, without air replacement, and repeated daily as long as 100 cc or more are obtained. If the underlying lung is normal, almost any amount of fluid can be removed in one sitting. Thoracentesis must be discontinued, however, whenever the patient starts to cough severely, or complains of

pain and tightness in the chest. If this happens, an underlying pulmonary atelectasis should be suspected.

With massive hemothorax, some operators prefer to insert a large intercostal chest tube (#34 or #36 F right-angle catheter for example) attached to a water trap bottle. They argue, with considerable validity, that *continued* bleeding can be more accurately assessed by this means.

In the treatment of pneumothorax, the dictum is the same: Thoracentesis and rapid re-expansion of the lung by removal of air. If the pneumothorax recurs, or if evidence of increased pressure become manifest, catheter drainage of the chest with water seal drainage is mandatory. Pressure (tension) pneumothorax is always dangerous. In a dire emergency, a large bore needle may be plunged into the chest without local anesthesia or syringe, so that the excess air will escape under pressure.

The insertion of a chest tube is a simple technique. Under local anesthesia, a stab wound is made in an upper anterior interspace, and a catheter of approximately 30 French is inserted. We prefer a right-angled catheter, or a Mallecot, so that the catheter itself can hug the chest wall. This should be immediately connected to a water trap bottle which is then kept below the level of the chest at all times.

*Pulmonary contusion.* This is usually not serious. Blast injury of the lung is a type of severe diffuse contusion which may cut the respiratory reserve to a dangerously low level. Tracheostomy will undoubtedly be of assistance. Patients with severe contusion do very poorly under general anesthesia.

*Pericardial tamponade.* Both penetrating and nonpenetrating injuries may cause bleeding into the pericardium. The symptoms of tamponade must be kept in mind: a quiet heart, with distant or muffled sounds, increased venous pressure, a narrowed pulse pressure. If these signs develop slowly, aspiration may be attempted for relief, but only with the realization that surgery may become necessary if aspiration fails.

*Myocardial contusion.* This probably oc-



curs more often than is realized. Crushed chests and steering wheel accidents are fruitful sources of myocardial contusion. Diagnosis is important both from medical and medicolegal points of view. Anterior chest pain out of proportion to the obvious injury may be a warning sign. Various rhythm disturbances are prominent: tachycardia, bradycardia and extra systoles. An electrocardiogram should be routine in every case of anterior chest injury. If negative, it should be repeated within 48 hours, since the electrocardiographic signs of myocardial injury are not always immediately manifest. When positive, they are typically those of low voltage in one or more leads, abnormal T waves, High ST segment take-off and at times, prolonged PR interval. Obviously, therefore, the signs and symptoms are very similar to those of true myocardial infarction. Treatment should be strict rest, sedation, and oxygen. Anticoagulants are contraindicated. Any except the most necessary life saving surgery must be postponed when myocardial contusion is present.

It should be emphasized again that most civilian thoracic injuries can be cared for by the knowledgeable general physician or surgeon. The steps in thoracic resuscitation as outlined above will adequately care for some ninety per cent of injuries encountered, without recourse to major immediate thoracic surgery.

For the sake of completeness, however, the specific indications for immediate or early surgery should be given. In general, it probably would be well to seek specialist consultation before embarking on such a course. The specific indications for early surgery and thoracic injuries are as follows: (1) severe continuing hemorrhage; (2) thoraco-abdominal wounds and injuries; (3) suspected mediastinal transverse with esoph-

ageal perforation; (4) cardiac and pericardial wounds; (5) ruptured diaphragm; (6) sucking wounds; (7) uncontrollable pressure pneumothorax.

### **Thoracic Trauma in the Patient With Multiple Injuries**

There is much discussion these days of the "multiple trauma" patient with thoracic injuries. Early surgery may be necessary to staunch exsanguinating hemorrhage, amputate a mangled limb, curb peritoneal contamination, or close a ruptured viscus. Hurred and poorly timed major surgical intervention in any part of the body, however, without due regard to chest trauma may well end fatally. The steps outlined above for thoracic resuscitation are straight-forward. Within a few hours, the patient will be in better shape for major surgery in the chest, or other parts of the body.

There remain two thoracic conditions which are not promptly amendable to resuscitative measures. These are blast injury of the lung and myocardial contusion. The dangers of general anesthesia in the presence of these complications are very great. These injuries must dictate several days' delay in all but the most life saving surgery. If, however, such surgery is mandatory, it is best to prepare the patient as thoroughly as possible, consistent with the major surgical lesion. The mortality rate in such cases inevitably will be high, but apparently the risk is necessary. There remains a group of patients, however, with pure thoracic or other wounds in whom early surgery might be desirable, but is not mandatory. In such a situation, it is far better to delay surgery for a few days until the heart or lungs have recovered sufficiently to make general anesthesia relatively safe.

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A significant percentage of expectant mothers have antibodies that can cause potentially fatal anemia in the newborn and that would not be detected by the customary prenatal blood test, according to Dr. Daniel J. Hanson, Toledo, Ohio. (News Release, AMA Convention, June 22, 1964).

# Primary Malignant Tumors of the Retroperitoneum\*†

**T**UMORS of the retroperitoneal area have assumed more importance as the surgical attack on abdominal cancer has increased in tempo. These tumors may be identified with a high degree of accuracy by appropriate diagnostic examinations and must be included in the differential diagnosis of any abdominal mass. Correct diagnosis is particularly important since approximately 80% of retroperitoneal tumors are malignant and distant metastases are present in one third of these at the time of diagnosis.

The retroperitoneal space is defined as that area between the peritoneum and posterior parietal wall of the abdominal cavity. It is bounded superiorly by the diaphragm and inferiorly by the pelvic brim. The so-called primary retroperitoneal tumors arise within this space and classically are considered to exclude tumors arising from retroperitoneal organs such as the kidneys, pancreas and adrenals.

## Materials

The Tumor Registry at Charity Hospital lists only 41 primary malignant retroperitoneal tumors (Table 1) in their total records of 25,647 malignant neoplasms from 1948 through 1962. All had microscopic confirmation of their diagnosis (Table 2). The diagnosis was confirmed by examination of tissue obtained at laparotomy in 35 patients and at autopsy in the remaining seven.

The most common tumors of the retroperitoneum are the lymphomas, i.e., lymphosarcoma, Hodgkin's disease and reticulum cell sarcoma. Most series place lymphomas first, but the order of frequency after this is subject to disagreement. Table 3, adapted from Melicow,<sup>1</sup> lists the malignant tumors which may be found in the retroperitoneum and their tissue of origin.

Most retroperitoneal tumors occur in the elderly not unlike the majority of malig-

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Table 1

|                           | Number<br>of Patients | % Retroperitoneal<br>Tumors |
|---------------------------|-----------------------|-----------------------------|
| Hospital Admissions ----- | 980,048               | 0.004                       |
| Total Malignancies -----  | 25,647                | 0.16                        |

Table 2

## RETROPERITONEAL TUMORS

| Tumor                          | No. of<br>Cases |
|--------------------------------|-----------------|
| Lymphoma -----                 | 16              |
| Neuroblastoma -----            | 6               |
| Leiomyosarcoma -----           | 5               |
| Liposarcoma -----              | 5               |
| Malignant Schwannoma -----     | 4               |
| Undifferentiated Sarcoma ----- | 3               |
| Fibrosarcoma -----             | 1               |
| Rhabdomyosarcoma -----         | 1               |

nancies arising elsewhere. This excludes neuroblastomas, which are usually tumors of childhood, and all six of which in the present series occurred in children below the age of ten.

The overall ratio of males to females was 25 to 16. This and other series failed to correlate race, climate, genetic, or geographical factors with the frequency with which these tumors are seen.<sup>2</sup>

## Diagnosis

The most common initial symptoms observed in this series were weight loss and abdominal enlargement. Several presented with the complaint of a specific mass in the abdomen or flank.

\*Presented at the 97th Annual Session of the Nebraska State Medical Association, Omaha, April 26-29, 1965.

†The cooperation of the Tumor Registry of Charity Hospital of Louisiana at New Orleans is appreciated.

Table 3

ADAPTED FROM MELICOW<sup>1</sup>

| Tissue of Origin                       | Malignant Tumor                        |
|----------------------------------------|----------------------------------------|
| Fibrous-----                           | Fibrosarcoma                           |
| Adipose-----                           | Liposarcoma                            |
| Mucoid-----                            | Recurrent Myxoma                       |
| Muscle-----                            | Leiomyosarcoma                         |
|                                        | Rhabdomyosarcoma                       |
|                                        | Myoblastoma                            |
| Vascular-----                          | Hemangioendothelioma                   |
|                                        | M. Hemangiopericytoma                  |
| Mesenchymal-----                       | Mesenchymoma                           |
| Lymphatic-----                         | Lymphangiosarcoma                      |
|                                        | Lymphosarcoma                          |
|                                        | Hodgkin's Disease                      |
|                                        | Reticulum Cell Sarcoma                 |
| Mesothelial-----                       | M. Mesothelioma                        |
| Nerve-----                             | Partially Differentiated               |
|                                        | ganglioneuroma                         |
|                                        | Sympathicoblastoma                     |
|                                        | Chordoma                               |
|                                        | Malignant Schwannoma                   |
| Extra-adrenal<br>chromaffin tissue---- | M. Extra-adrenal pheo-<br>chromocytoma |
|                                        | (?) M. nonchromaffin<br>paraganglioma  |
| Cell rest-----                         | Teratoma                               |
| Gland tissue-----                      | Adenocarcinoma                         |
| Reticulo-<br>endothelial-----          | Xanthosarcoma                          |

Aside from these complaints, a mass in the retroperitoneum may cause symptoms in a variety of ways. Since the tumors enlarge in the direction of least resistance—i.e., anteriorly—the encroachment upon the abdominal viscera explains their varied symptomatology.

Pressure on the stomach or duodenum may cause upper gastrointestinal symptoms such as nausea, vomiting, or a sense of fullness. Occasionally jaundice is seen following compression of the common duct. Back pain may progress to a radicular type pain as nerve roots are involved by compression or direct extension.

Urinary frequency may be a problem if the bladder has been compromised. Ureteral obstruction is not uncommon, with resulting hydronephrosis and possibly uremia. Hematuria may occur as a result of involvement of any portion of the genito-urinary tract.

The diagnosis of retroperitoneal tumor may be suspected by physical examination. It may be confirmed preoperatively by the radiological examinations listed below.

1. Anterio-posterior and lateral views of the abdomen (KUB). These often will show a soft tissue mass and its position may suggest a retroperitoneal origin.
2. Upper gastrointestinal series. When a mass is present in the superior portion of the retroperitoneal space, the stomach or duodenum or both will be displaced. No diagnostic pattern is noted, however, and it is the displacement per se which is of importance.
3. Barium enema. The principle of displacement is again of primary importance.
4. Intravenous pyelography. This is a particularly important diagnostic tool. The kidneys may be displaced or show decreased or unilaterally absent function. The normal course of the ureters is altered by the presence of an expanding mass in the retroperitoneum.
5. Retrograde pyelography. This should be undertaken when one kidney fails to visualize or there is persistent failure of the ureters to visualize.

It is of particular importance to obtain

Table 4

| Diagnosis            | No. of<br>Pts. | Avg.<br>Survival | No<br>Therapy | Surgery<br>Alone | X ray<br>Alone | Surgery<br>and<br>X ray | Other |
|----------------------|----------------|------------------|---------------|------------------|----------------|-------------------------|-------|
| Lymphoma -----       | 16             | 6 mo.            | 5             | 1                | 4              | 1                       | 5     |
| Neuroblastoma -----  | 6              | 47 mo.           | 1             | 0                | 2              | 1                       | 2     |
| Leiomyosarcoma ----- | 5              | 8 mo.            | 2             | 2                | 1              | 0                       | 0     |
| Liposarcoma -----    | 5              | 68 mo.           | 0             | 3                | 2              | 0                       | 0     |
| Malignant            |                |                  |               |                  |                |                         |       |
| Schwannoma -----     | 4              | 7 mo.            | 2             | 2                | 0              | 0                       | 0     |
| Undifferentiated     |                |                  |               |                  |                |                         |       |
| Sarcoma -----        | 3              | 9 mo.            | 0             | 0                | 2              | 1                       | 0     |
| Fibrosarcoma -----   | 1              |                  | 0             | 1                | 0              | 0                       | 0     |
| Rhabdomyosarcoma --  | 1              |                  | 0             | 0                | 0              | 0                       | 1     |



lateral as well as antero-posterior views when these studies are being utilized to detect a retroperitoneal mass.

Additional radiological examinations which may be employed include perirenal aerograms, retroperitoneal air insufflation studies, abdominal aortography, and abdominal venography.

Since the patients in this series were hospitalized over a period of 14 years and studied on different services, there was no uniformity in the diagnostic workup. In the past nine years, however, more and more patients have been studied radiologically in the manner outlined above.

### Treatment

Patients with a known or suspected retroperitoneal tumor deserve surgery. Exceptions include those patients in whom evidence of metastasis is present or those unable to tolerate surgery. The surgeon must be prepared to perform extensive surgery, for herein lies the best chance for a cure.

Thirty-four patients underwent laparotomy and 20, or 60% of these, were found to be non-resectable. Twelve, or 64%, of the patients who underwent surgery on an elective basis after completion of their diagnostic work-up had a correct preoperative diagnosis of retroperitoneal tumor. The majority of these patients had undergone three or more of the diagnostic radiologic tests mentioned earlier, indicating the high degree of accuracy which may be achieved in diagnosis when a thorough examination is carried out preoperatively.

There has been no standard form of therapy in the treatment of retroperitoneal tumors at our institution (Table 4). Although 83% of our patients underwent laparotomy, a palliative resection was performed in many cases, and in only four cases did the surgeon feel that he had completely excised the tumor. These four cases represented four different types of tumor: malignant schwannoma, fibrosarcoma, lymphoma and liposarcoma. The survival times of these four patients were longer than others with the same diagnosis in whom incomplete excision and other forms of therapy were utilized, which sug-

gests the importance of excision whenever possible.

The treatment employed for the various tumors reported here does not differ greatly from therapeutic measures undertaken elsewhere.

*Lymphoma.* There were 16 cases of lymphoma reported in this series. The term lymphoma here is inclusive of Hodgkin's disease, lymphosarcoma, and reticulum cell sarcoma. Six types of therapy were employed, varying from none to X ray plus chemotherapy. There is no evidence that any form of therapy was superior to any other. No patients are alive at this time, and the average survival was only six months. If surgical excision is employed, postoperative irradiation or chemotherapy should follow. Radiotherapy should be used in all cases, for this usually results in marked diminution in the size of the tumor mass and alleviation of symptoms.

*Neuroblastoma.* The best form of treatment appears to be surgical excision followed by immediate postoperative irradiation. In the event the tumor is non-resectable, then good palliation may be anticipated with irradiation alone. The average survival was 47 months, with one patient alive 14 2/3 years after incomplete excision and postoperative irradiation. Another patient is alive eight years after diagnosis, having been treated with X ray and vitamin B<sub>12</sub>.

*Leiomyosarcoma.* The five patients in this series had an average survival of eight months. The longest was 17 months. Pack and Tabah report that surgical excision is the treatment of choice.<sup>3, 4</sup>

*Liposarcoma.* This neoplasm has perhaps the best prognosis of all malignant retroperitoneal tumors. The average survival in this series was 68 months, with one patient having survived over 14 years. The treatment of choice is surgical excision.<sup>5, 6</sup> Recurrences may be treated by re-excision, irradiation, or both.

*Malignant schwannoma.* For the four patients with this diagnosis, the average survival was only seven months. Surgical ex-

cision generally represents the only effective form of therapy.

*Undifferentiated sarcoma.* One patient treated with surgery and postoperative irradiation survived eight months. Irradiation alone in the other two led to a ten month survival in one and six and one-half years in the other.

*Fibrosarcoma.* The one fibrosarcoma was treated by surgical excision and survived two years and seven months.

*Rhabdomyosarcoma.* One tumor was resectable and the patient was treated with irradiation and nitrogen mustard. The survival was six months following diagnosis. The best form of treatment for this lesion is surgical excision with follow-up irradiation.

### Discussion

The prognosis in patients with retroperitoneal tumors is poor, but not hopeless. Long-term survivals have been obtained. The anatomical location of these lesions is responsible for the fact that the tumors are usually large and well advanced before the onset of symptoms. Similarly, their location often prevents the surgeon from being sufficiently radical with his excision.

The preoperative diagnosis may be established with a high degree of accuracy by the utilization of the five radiological examinations outlined earlier. In general further studies are superfluous, and only contribute to delaying definitive therapy.

The treatment of these tumors varies somewhat depending upon their type, but radical surgical excision is the generally accepted treatment of choice, except for lymphomas. Early and extensive surgery offers the only opportunity for a cure, and its importance cannot be over-emphasized.

Irradiation is the second most important form of therapy for these tumors. A high percentage of all retroperitoneal tumors is radiosensitive. Of the neoplasms represented in this series, only the malignant schwannomas fail to respond well to irradiation. One series reported a 77% radiosensitivity,<sup>2</sup> while Judd and Larsen<sup>7</sup> found 30 of their

32 tumors responded to X-ray therapy. Pack and Tabah<sup>3,4</sup> recommended radiotherapy for the following indications:

1. Inoperable retroperitoneal tumors.
2. Postoperative recurrences.
3. Incomplete excisions.
4. Lymphomas.
5. As an adjuvant to surgery in the treatment of rhabdomyosarcomas, neuroblastomas, and undifferentiated sarcomas.

The place of chemotherapy in the treatment of these tumors has been less extensively investigated. At the present time, chemotherapy appears to be efficacious only in the treatment of the lymphomas.

### Summary

The 41 cases of malignant primary tumors of the retroperitoneum recorded by the Tumor Registry of Charity Hospital have been reviewed. The presenting symptoms were varied, and related to the position of the tumor. The most common initial symptoms observed were weight loss and abdominal enlargement. The best means of establishing a preoperative diagnosis is through the utilization of X rays of the abdomen, barium enema, upper G.I. series, IVP, and retrograde pyelography. The best form of therapy is surgical excision, with the exception of the retroperitoneal lymphomas. Irradiation is helpful in the treatment of the lymphomas, in instances of inoperability, postoperative recurrence, incomplete excisions, and as an adjuvant to surgery in the treatment of rhabdomyosarcomas, neuroblastomas, and undifferentiated sarcomas. Chemotherapy produces good results only with the lymphomas.

Surgical removal of the tumor should be attempted in any patient with a suspected retroperitoneal tumor in the absence of distant metastasis.

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"Ambulance Not Emergency Vehicle. Ambulances in Little Rock, Arkansas, can no longer exceed the speed limit, ignore traffic lights, or use a siren. An ordinance passed by the Little Rock City Board of Directors on July 20 of this year (1964) 'completely removes ambulances from the status of emergency vehicles' . . ." (From Bulletin of the American College of Surgeons, November-December, 1964, p. 361).



# Progress In Medicine – A Look Ahead

**P**ROGNOSTICATION and prediction are two of the most hazardous areas into which a physician may enter. Certainly the art, as well as the science of medicine, must be brought into play if disaster is to be avoided. Experience suggests that a prognosis or prediction should not be offered until full attention to the history and physical examination has been given, including of course a past history. Therefore, let us look back before we look ahead.

In the United States, medicine in the early days was practiced by men who received their training primarily on the basis of an apprenticeship. The first medical school in the United States was established in 1752 in Philadelphia. The first hospital did not enter upon the scene until ten years later in 1762. The oldest hospital in Omaha, St. Joseph's, opened in 1870. My own Alma Mater, the University of Nebraska College of Medicine, opened in 1883 with a large class of 52 students. However, there was a wide feeling that a University should not provide professional education at public expense. Also, a then existent private medical school in Omaha wished to eliminate competition that was cutting down its profits. This group propagandized so effectively that the legislature withdrew its support, forcing the school to close in 1887. However, it reopened in 1902 and has flourished since.

Between 1800 and 1900, 457 schools of medicine were established in the United States. Many were diploma mills, a number had no laboratory facilities whatsoever, and more than a few were established primarily as economic enterprises designed to handsomely reward their founders on the basis of tuition fees. Between 1906 and 1907, 106 medical schools were inspected by the American Medical Association. The AMA's very frank and, indeed, scathing report gave rise to a great hue and cry in this country about the quality of medical education and more than indirectly about

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the quality of medical practice. Therefore, the Carnegie Foundation asked to have an inspection of medical education by an eminent non-medical man. This was done by Abraham Flexner and the Flexner report of 1910 remains to this day one of the great documents in the annals of American medicine. It was as a result of this document that only 80 medical schools existed in the United States by 1926. Today there are 89 approved American medical schools, with 12 in Canada. Four of these are 2-year schools; all are Class A.

At this point, much of what I have had to say has to do with medical education. The relationship between medical education and the practice of medicine is a reciprocal one and each must influence the other if the progress of the last 150 years is to be maintained. The reproduction of the species physician has been a concern of practitioners of the art for many centuries. Today we have real cause for concern in this regard. Authoritative and reliable estimates report that the United States will, by 1975, require 3600 more medical graduates than we now produce. This is about a 50% increase in graduates and this increase will only maintain the present doctor-to-population ratio. To achieve such an increase will require the expansion of existing schools and the creation of from 14 to 20 new medical schools at an estimated overall cost of \$1 billion. To graduate 3600 more students by 1975 means that these students must start medical school in 1971. The lead time for establishment of a new medical school is approximately eight to ten years. Therefore, it is apparent that this is an immediate, and not a distant, problem. Indeed, we are already behind. It seems apparent that increased federal support of medical education in terms of construction,

operating costs, and student support will be necessary. This began this past year with passage of HR 12. I sincerely hope, however, that the several states and private enterprises will meet this challenge forthrightly and that *federal* control of medical education in the United States will not come to pass.

However, a second aspect of the problem deserves serious thought and effective action. In 1948 there were approximately 6500 places in medical school freshman classes and 25,000 individual applicants. Even though this is a high figure representing a post-war phenomenon, it is of more than academic interest to know that by 1958, with approximately 1000 more places in medical schools available, the number of applicants had dropped to about 15,000. Although there have been increases in the last several years, the matter is still one for concern when one recognizes the expansion in college enrollment that has occurred in the last ten years. Relatively, then, there has been a progressive and a substantial drop in the number of qualified young men and women with an interest and a desire for medicine. Today medical schools are engaged in recruitment programs in order to obtain an adequate supply of qualified students to fill their first year classes. The outlook in dentistry is similar, and schools of nursing are also recruiting.

There are many reasons advanced for the existing reproductive problems of the species physician. These "deterrents to medical education" include the time required for medical education, the cost thereof, the increased attractiveness of other professions, the relative opportunity for a medical education, and the rapid rise of competing opportunities. If larger numbers of intelligent and well-motivated young people, that you might one day wish to have as your physician, are to enter the medical profession, then it behooves us all to make a realistic appraisal of the facts before us. The facts and the figures as I have stated them are conservative. They do not take into account the increasing numbers of physicians involved in teaching, research, the pharmaceutical industry, and government

service, with the consequent result that relatively fewer men are available to meet the *first* obligation of service to the community. These figures do not recognize the relative increase to be expected in the geriatric and pediatric portions of our population and the higher service demand by those groups. They assume peace and economic security for the state and for the nation.

I do not have the solution to the problems here presented. I do know that problem solving begins with interest and attention and, therefore, report these facts in the hope that they may merit both the interest and the attention that, in my opinion, they deserve.

Today, organized medicine at all levels is actively engaged, as are many others in the health field, in programs designed to interest young men and women in medicine and similar areas of health care. *I would predict* that we will *not* succeed in producing 3600 more medical graduates by 1975, but that we may well achieve better than half of that number. As you may know, a new medical school is in operation in New Mexico and new schools are under active planning in Rhode Island, Arizona, and Southern California, as well as several locations in the Northeastern United States, including Connecticut, Massachusetts, Rutgers, Hershey, Pa., and South Texas. Plans have been made toward a two-year medical curriculum as part of an Institute of Biology at Michigan State University.

There is much talk about shortening the length of time required for medical education. The actual medical curriculum of four years has not been increased for many years. However, the amount of material that it has been necessary to cover in the four years of formal medical education has increased astronomically. While the calendar length has not increased, a progressively greater utilization of the time in those four calendar years has occurred. The experiments designed to shorten medical education are, in my opinion, doomed to success. I am sure that it will be possible to pick a small number of highly talented individuals and demonstrate that it is possible to give



them a medical education in less than the seven to eight years now required. However, I submit that this offers no real contribution insofar as mass production is concerned. It also allows inadequate time for maturation of the individual. Therefore, I believe that there is no real point in discussing a significant shortening of either premedical or medical education. Indeed, it is my own opinion that the problem is not the length of the period of the education but rather the length of the period of starvation. *I would predict*, therefore, that we will see in the future a much more realistic level of compensation for interns and residents. For it is in this period of postgraduate training that medical education has been lengthened and that the sociologic impact, as well as the economic one, has been so clearly seen. The resident physician today is usually married and better than half the time has started a family. He has borrowed money during medical school and he finds it progressively difficult to continue to borrow through his residency training. These problems are recognized and I think we will see continuing moves toward their solution. The establishment of the AMA loan fund has been most helpful here.

Medical education has a responsibility to the practice of medicine to provide an increasing number of the best qualified medical graduates and it has done this better than any country in the world. Along with this, medical education has progressively moved into the field of research, largely on the basis of assistance from the federal government. In 1940, federally supported medical research totaled \$3 million. By 1957, this was \$186 million, currently it is over \$500 million, and by 1970 *I would predict* that it will exceed \$1 billion. The fruits of medical research are only of academic interest, however, until put into use in the care of patients. It is the productivity of new knowledge and new techniques that makes the physician more efficient in his ability to care for his patient than has ever been the case before.

One of the most striking changes in medical practice in the past 15 years has been the development of whole categories of new

drugs which were unknown at the time most practicing physicians were in medical school. I am one of the first to recognize that pharmaceutical companies have a sincere interest in benefiting the patient and I recognize the great value of trademark and brand names as guarantees of quality. The ready availability, reliability, potency, purity and specificity of the drugs now available in the United States has been made possible only through the extraordinary achievements of the American drug industry operating in an atmosphere of freedom in a competitive society, and I oppose publicity-seeking political efforts to change this!

Pharmacology courses today are concerned primarily with mechanisms of a drug action and on the manner in which to evaluate the effectiveness of a drug. The biochemistry of drug development with particular emphasis on synthesis of new compounds by the chemist is a growing part of pharmacology instruction. It looks as though we may be, and *I predict* that we are approaching the ability to correlate chemical structure of a compound and its mode of action.

Of all the changes in medical practice in the last one or two decades, perhaps the most striking are the changes in patterns of infectious disease. In the last few years, we have seen come to mankind through the hands of the medical profession with the help of the pharmaceutical profession, a beneficial change so profound that we are only barely becoming aware of its broad implications. It has been estimated that over two million Americans are alive today that would not be with us had it not been for new therapies available over the last 15 years.

But the problem of infectious diseases is by no means solved. The diagnosis and treatment of viral disorders is as primitive today as was that of pneumonia in the twenties. Influenza, hepatitis, and the neurotrophic virus diseases still are major health hazards. The will of the bacteria to survive through genetic mutation has expressed itself in an increasing prevalence of organisms resistant to our new chemo-



therapeutic agents. This is a jungle warfare — and only a beachhead has been established. We are just beginning to understand the mechanisms by which organisms alter their resistance or enhance their invasiveness.

In teaching bacteriology, then, viruses and fungi are given a level of attention which was unknown when most of us went to school. The mechanisms of the immune response have been increasingly emphasized, since it is through this mechanism that viral infections can be prevented and by which recurrent infections are inhibited by natural defense mechanisms. Through this emphasis the student will be prepared not only for effective use of the techniques that will be available when he graduates, but also for new techniques and developments as they evolve in the future.

With our success in diminishing the death rate from infectious diseases, the importance of heart disease, cancer, and the diseases of aging become increasingly apparent. While the public press might give us the impression that these problems are restricted to geriatrics, this certainly is not the case. Deaths from arteriosclerotic heart disease are a significant source of mortality in men above the age of 40. Cancer continues to cause a significant number of deaths in every age group, including childhood. But, lest I sound pessimistic, let me *predict* that the future will see us ever nearer to the elucidation of a virus causation for some types of neoplasm. We now know much more than we did five years ago about something called the erythrocyte stimulating factor. We have knowledge of a lipid-mobilizing factor wherein stress raises the content of fat in the blood and this may lead us to an understanding of atherosclerosis, including coronary heart disease. I need not pursue this as an area of hope for future investigation. We are learning more and more about bone marrow transfusions with all of the implied aids for patients with aplastic anemia or excessive exposure to radiation. Organ transplants, artificial organs, etc., are common conversation. Therefore, I look upon the future as being very hopeful. I think that our golden decade in

medicine is going to become a golden 20 years and, perhaps, even a golden 50 years. In my opinion, we are in the midst of a medical renaissance.

As the knowledge that we have in medicine and the health sciences has increased, and if my prediction is right that it will continue to increase, the need for people with specialized skill and knowledge will become progressively more urgent. Today no one individual physician can become well enough informed so that he can claim true competence in all areas of medicine. It is likely that we have only begun to see the full development of specialization. I would predict, therefore, more specialization rather than less. Certainly the synthesizing role of the generalist is more important today than ever before. Nevertheless, we must recognize that the continued outpouring of important new knowledge and information will increasingly emphasize that the total of our knowledge in medicine is far beyond the capacity of any one person to master it. We will continue to have generalists and I would strongly urge that we do so. However, they will, in my opinion, make increasing use of the specialized knowledge of other physicians and be particularly aware of what specialists may have to offer. I see in the future an increasing utilization of the community hospital and an increase in a group type of medical practice. I believe that this will develop in an atmosphere of freedom, that free choice of physicians will be preserved, and that room for independent enterprise will be made, for a doctor-patient relationship cannot be successfully established between a patient and a group but only at an individual level.

I wish to comment on one more important area. The very excellence of medicine has created an unprecedented demand for the services of the physician. We have twice as many physician visits in the United States than in countries like England and Sweden where there is no economic barrier to seeking out medical care. In 20 years then, the American doctor of medicine has doubled his productivity, since the MD-population ratio has remained essentially

unchanged. In the United States, however, and in many other countries there is a disconcerting assumption that has developed along with this increased demand that the individual is not responsible for meeting the costs of this valuable service and that he should somehow be asked to pay less than the actual expense. It is true that hospital and medical costs have risen sharply. In terms of actual value received, however, the excellence of medicine has increased far more rapidly than has its costs. The rate of charges for hospitals has increased many times that of medical charges by physicians. The reason for this is perfectly simple and obvious. As the base wage which has been demanded for hospital workers has increased, the cost has paralleled it. The service concept in hospital functioning has been grossly diminished and the hospitals are now adding a new cost to their operation in providing insurance against malpractice suits. These changes are not those that have been dictated by the medical profession but rather by the community which is being served. The increasing use of third-party payments and the growing interest in having the third party represented by units of government further and further away from the local community and currently emphasizing the

role of the federal government, have created problems in medical education as well as in medical practice. The inevitable control that is exerted by the agent who pays the bills is a consideration more apparent to the medical profession than it seems to be to the layman. In the last analysis it is the individual and the community who must pay the full cost of medical and hospital care, whether the payment is made directly or through some central agency. Actually, the costs of medical care may very well have been significantly increased by having to pay the overhead of government agencies which first collect and then redistribute the dollars that pay for medical services.

Let us ever keep in mind that men throughout the course of history have seldom been free and never for very long. Freedom in the United States of America for these almost 200 years is but a fleeting moment in the pages of history. It is imperative that we guard and protect our freedom as a precious and vital asset and an essential nutriment to our way of life. *I predict* that health care in the United States will continue to improve in quality, in quantity, and in availability and that, at the same time, Americans will remain free.

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In a study of one thousand proven cases of lung cancer, at Mercy Hospital, Pittsburgh, nearly half — 474 cases — were found to be non-smokers, according to Dr. Joseph A. Perrone, chief of otolaryngology and bronchology at Mercy Hospital and the Skin and Cancer Foundation, Pittsburgh. ("One thousand cases of lung cancer." *Pennsylvania Medical Journal*, April 5, 1964).

# NEUROLOGIC MANIFESTATIONS of Electrical Injury

**T**HE trauma of electricity is often sudden, elusive, unexpected, fleeting and even intricate. It is fraught with many variables and frequently difficult to quantify in its effects on human tissue. Individuals have survived without sequelae following apparent remarkable exposure and acute injury. Others have died or long remained disabled from seemingly small amperages. Emotional factors may complicate clinical pictures. Preceding or incipient (unrelated) illness may suddenly appear precipitated by electric shock.

It is important to reconstruct all details of the injury and the laws of physics applicable at the time of injury:

- Voltage
- Amperage
- Duration of exposure
- Alternating or direct current
- Frequency
- Description of contact (entry)
  - Broad flat surface?
  - Tip of wire, sharp point?
  - Spark or flash?
- Skin resistance (Estimate ohms. Thin, moist skin vs. dry callosities).
- Insulation
- Course of current through body (vital sites in pathway).
- Exit, grounding (dry protective vs. moist conductive).
- Current marks or burns at entry and exit sites.
- Did shock result in fall, and direct injury thus?

Electric current takes the shortest route in human body from entry to exit with very little diffusion in body tissues.

The *amount* of destructive force is related to amperage. The driving force or momentum behind it is related to voltage. Other factors equal, alternating current is approximately three times more injurious than direct current. Direct current under 220 volts seldom leads to death whereas even 25 volts alternating current may be dangerous (tetanization of respiratory muscles) if the body is well grounded. Alternating current in the cycles (50-60 per second) most eco-

nomical for commercial use is more dangerous to humans than other cycles. A body electrified by a flash or spark across a gap receives less injury than by direct (metallic) contact, since some of the energy is expended in formation of flash.

Thin, moist skin-surface may offer 400 ohms resistance or less. Dry skin may present 5000 ohms, and thick, calloused skin several 100,000 to a million ohms. Once current penetrates epidermis by burning, resistance drops rapidly. Tissue resistance varies: muscle presents 1500 ohms per cc; brain, 2000 ohms per cc; bone, 900,000 ohms.

Most persons can feel the tingle of 2 milliamperes alternating current. Five to 8 milliamperes are somewhat painful. Fifteen milliamperes are very painful and accompanied by severe muscle contractions. In gripping an electrically charged object, as 22 milliamperes (60 cycle) is attained, few individuals can let go.

Twenty to 75 milliamperes (ac) involving thoracic musculature stops respiration. With 75 milliamperes to three amperes through the chest, ventricular fibrillation is likely. Over six amperes readily produces respiratory (spinal, medullary) paralysis and cardiac asystole.

Judicial execution uses up to seven amperes. Death occurs by medullary paralysis, cardiac asystole and heat effects on the brain.

The efficacy of *contact*, *insulation*, and *grounding* are important factors. Contact may be imperfect, fleeting, requiring even a spark or flash across a gap. Contact may be close and effective to transmit a great flow of current into the body. The *area* of contact may be small or pointed, allowing less flow but more likely to burn a small

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hole. A broad area of contact allows ample transmission. *Indirect* contact may occur, with transmission through secondary objects, commonly water.

Current passing through left side of thorax presents greater dangers of ventricular fibrillation or asystole. The cranium presents an excellent shield for the brain since bones are poor conductors. Electrical energy will pass around the cranium in extracranial soft tissues if given the opportunity, as in a longitudinal course (for example, head to ipsilateral upper extremity). Scalp and cranium may be severely burned focally with apparently minimal penetration of brain by electricity. In more transverse courses involving the head (especially where entrance and exit are at opposite sides of the skull) or where the cranial resistance is overcome, more direct cerebral effects occur. Most commonly this results in paralysis of medullary respiratory centers.

Spinal cord may also be implicated, commonly in cervical region, by course of electricity from one upper extremity to another.

Superficial current marks vary from slight erythema (often with intricate or bizarre configuration from flash) to deep, cauterized charring, the latter being characteristic of high voltage effects.

An electrical shock often results in falls or direct blows, the patient dropping from heights; thrown by the sudden, concussive discharge of energy; struck by falling implements or debris.

The effects from commonly used currents may be outlined thus:

| Direct Current<br>Voltage  | Alternating Current<br>50 cps<br>Voltage  | Effect                                                                                                            |
|----------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 110-800                    | 110-380                                   | (through thorax)<br>Slight contracture of<br>respiratory muscles                                                  |
| Under 80<br>milliamp.      | Under 25<br>milliamp.                     | Respiratory muscle spasm.<br>If duration over 30 sec.,<br>cardiac arrest followed<br>by ventricular fibrillation. |
| 80-300<br>milliamp.        | 25-80<br>milliamp.                        | dc: ventricular fibrillation<br>only if precise course<br>through heart.                                          |
|                            | 80 milliamp.<br>to 3 amp.                 | ac: ventricular fibrillation<br>unless under 0.3 sec.                                                             |
| 300 milliamp.<br>to 3 amp. | voltage 3000 and<br>over; over<br>3 amps. | Respiratory muscle spasm.<br>Cardiac arrest. Serious<br>burns if over few seconds.                                |

Electricity affects living cells by heat generated in its course through tissue. This may vary from outright burning to mere "cooking" or only warming up a few degrees over 37° C. Electrolytic effects may also occur. Burns are usually external, at sites of entry and exit of current and found especially with high voltages. Smaller currents may stimulate conductive systems (like nerves, neurones or the myocardial bundle of His) to exhaustion.

Common immediate clinical effects of electric shock include:

- Direct burns at entry, exit.
- Syncope, coma.
- Respiratory paralysis (hypoxia).
  - From a.c. tetanization of respiratory muscles.
  - Paralysis of medullary centers.
- Ventricular fibrillation or asystole.
  - Occasionally only auricular fibrillation.
- Transient neurologic deficit.
  - Cerebral.
  - Spinal cord.
  - Peripheral nerve.

Less common effects are quite varied and perhaps any neurologic syndrome, major or minor, may be produced by severe electroshock. Careful distinction must be made, however, to discern:

- Pre-existing disease (often minimal or sub-clinical, seemingly precipitated by electroshock).
- Injury from fall or direct blow, incurred with or following electroshock.
- Psychoneurotic reaction precipitated by this experience.

The latter type of reaction is demonstrated by recent report in an orthopedic journal of a patient struck in shoulder by lightning, grounded on right hand, sustaining stocking anesthesia and analgesia of that entire extremity without motor impairment (Simon, S. D., *et al*). Such "brachial neuropathy" requires neurologic and psychiatric scrutiny.

In the neurologic realm of interest, neurones, nerve fibres or blood vessels may be injured, transiently or permanently. Neural tissue may be affected by electrostimulation, electrolysis, or heat. Blood vessels are damaged by heat and they often are found to be brittle or friable even at a distance from burned sites. Severity of burning is usually in direct relationship to voltage.

Death or recovery with transient neurologic syndromes are most common. Recovery with permanent neural deficit is less common. Some patients present syndromes of subjective distress (for example, headache, dizziness, anxiety, emotional instability or autonomic dysfunction) reminiscent of those seen following craniocerebral "concussion." Latent, delayed onset of neurologic syndromes is rare and considered with skepticism by a number of authorities. Progressive diseases like multiple sclerosis and amyotrophic sclerosis are not considered related to electroshock.

Many patients with ensuing Parkinsonism have been found to have had this prior to injury. Patients with cerebral arteriosclerosis, and imminent expression of this, pose difficult problems in determining cause and effect.

Coma, stupor, or confusional state are not unusual following electroshock. They may be due to direct passage of electricity through brain, hypoxia (respiratory paralysis), cardiac arrest, or the physiologic shock (hypotension) of severe burns or other injury. Respiratory paralysis (apnea) and cardiac arrest must be dealt with at once. Many patients, seemingly dead, respond remarkably to resuscitation. It is often stressed that with the respiratory failure of electroshock, artificial respiration may have to be continued for hours and should

not be stopped until it can be proven (EKG or rigor mortis) that the patient is dead.

Depending on course of current, other organs in its pathway may be injured, particularly kidneys. Kidney damage may occur also from myoglobinuria following extensive burns of muscle, and from hypoxia and hypovolemia.

As patients with *minimal* and *maximal* current passed through the brain are examined, one notes the following progression of effects:

- Momentarily stunned, dazed, confused.
- Unformed visual hallucinations ("stars," "balls of fire.")
- Stupor, "petit mal," coma (brief).
- Grand mal convulsion.
- Prolonged coma, prolonged paralysis of medullary centers.
- Cerebral edema.
- Heat damage to brain and its blood vessels.

Light stupor ("electrosleep") has been produced by passing small, precise currents through the brain. Standard electroshock treatment for psychiatric patients employs 200-1600 milliamperes, 50-60 cycle ac at 70-130 volts for 0.1-0.5 second through the brain to produce a single grand mal episode. It is likely, however, that only a small fraction of this current traverses the brain. The rare complications of electroshock treatment are seldom neurologic and these in the nature of cerebrovascular insults. The EEG changes occurring with a single electroshock treatment have been described:

- During tonic phase: high voltage, fast spike discharges.
- Clonic phase: spike discharges are interrupted by periods of electrical silence.
- Deep coma: flat tracing, then gradual appearance of slow, 0.5 cps waves which slowly increase in voltage and frequency to 2 cps.
- Continued increase in frequency of rhythms. Increased amplitude at first, then decrease.
- Alpha rhythm reappears and EEG returns to pre-treatment state.
- (Duration of last three phases depends on number and frequency of treatments given previously).

After three to five treatments, EEG alterations are persistent, increasing up to 6 and 12 treatments, reaching a plateau at that level. These changes are diffuse and disappear gradually in weeks after treat-



ments cease, lingering in proportion to the number of treatments given:

Slow, delta waves, frontal, temporal.

Generalized voltage increase.

Spike-like waves, medium to high voltage, positive discharges, diphasic spikes.

Runs of slow waves (3-7 cps).

Bursts of high voltage theta.

Following accidental electroshock, hypoxia and heat damage are likely the causes of permanent neurologic sequelae seen in the occasional patient. A diffuse and massive charge of electricity through the brain causes damage by generalized heat. In many instances, the electrical energy dissipates mostly at the scalp and cranium, with a burn; little if any electricity passing through the brain. Many of these patients surviving have no cerebral sequelae; some have a post-concussion syndrome; a small percentage incur burns deep enough to involve dura and brain at a focal site; rarely epidural infection occurs.

Whether isolated cerebrovascular insults may be blamed to electricity is uncertain. Focal thrombosis and hemorrhage have been cited and the problem is much like that seen following direct craniocerebral trauma. One is left to presume that electricity may injure intracranial blood vessels.

Electricity may pass through the spinal cord transversely, obliquely or longitudinally with effects accordingly. Transient deficits are not unusual. Permanent defects may remain, of which syndromes of loss of anterior horn cells are common.

Peripheral nerves likewise may be transiently paralyzed or more permanently damaged by heat-effects from passage of current or by outright burns. Violent tetanic action, falls or blows may also contribute to vertebral and nerve injury.

A sharp rise of blood pressure with extensive and violent muscular contractions may be a factor contributing to intracranial bleeding in occasional patients.

The literature (especially older) reports an immense variety of neurologic syndromes and sequelae, many of which must be crit-

ically scrutinized. Because the intricacies of electrical injury are not well understood, neurologic damage is readily ascribed to electricity because it appeared to follow an electroshock. Neuropathologic proof is rarely available and explanatory theories are many. The following features particularly signify a need for critical study in a case at hand:

1. A small segment, focus or isolated intrinsic structure appears precisely and remarkably to have borne the brunt of injury (for example, a single nerve, a segment of artery, or basal ganglia).
2. The same lesion is known to occur without benefit of electrical accident, although of obscure origin (for example, unilateral vocal cord palsy, Parkinsonism).
3. The clinico-pathologic syndrome discloses mostly features of well-known disease (for example, multiple sclerosis, amyotrophic lateral sclerosis, myasthenia gravis) whose etiology is unknown today.
4. There is delay in appearance of postelectroshock injury. Most electrical neurologic injuries are of immediate expression. As each week passes, the likelihood of direct association or "cause" lessens.

*Lightning* presents a special form of electrical injury due to direct current of as high as 200,000 amperes and 50-100 million volts. Direct strikes are instantaneously fatal. Some persons receive less current from indirect transmission, through wet ground, buildings or trees, from a small flash (or "fork") removed from the main source, or from the distal portion of a nearly dissipated charge. Many persons are violently thrown to the ground by the force. The clinical problems disclosed by survivors of lightning strokes are similar to those of other electrical injury described above.

The emergency needs of treatment following electrical injury must be emphasized: prolonged artificial respiration; cardiac massage; defibrillation; hypothermia for severe hypoxia. Cerebral edema may be managed by hypertonic urea intravenously or by hypothermia. Interestingly, closed-chest defibrillation is accomplished by 5-7 amperes, 400-500 volts in 0.1-0.2 second shocks from manubrium sterni to apex of heart, allowing approximately 1.5 ampere to flow through the heart.

(References available from author).



## Coming Meetings

### CRIPPLED CHILDREN'S CLINICS—

October 9 — McCook, St. Catherine's Hospital

October 23 — Grand Island, St. Francis Hospital

November 6 — Norfolk, Norfolk State Hospital

November 20 — Alliance, Central High School Building

### CONTINUING EDUCATION COURSES FOR PHYSICIANS sponsored by the University of Nebraska College of Medicine's Office of Continuing Education:

October 1, 1965 — "Perinatal Mortality" (Lincoln General Hospital)

October 7-8, 1965 — "What's New for the Practitioner?" (Omaha Campus)

October 15, 1965 — "One Day of Proctology (Omaha Campus)

November 6, 1965 — "Cornhusker Surgery Conference" (Nebraska Center, Lincoln)

### OCCUPATIONAL HEALTH CONGRESS—

The 1965 Congress on Occupational Health, sponsored annually by the AMA Council on Occupational Health, will be held concurrently with the Indiana State Medical Association's annual convention. The meeting will take place at the Murat Temple in Indianapolis, October 12-14. Additional information may be obtained from: Department of Occupational Health, AMA, 535 North Dearborn Street, Chicago, Illinois 60610; or from the Indiana State Medical Association, 3935 North Meridian Street, Indianapolis, Indiana 46208.

**AAMA PLANS EDUCATIONAL SEMINAR** — The American Association of Medical Assistants will hold its annual meeting in New York, October 13-17. A two-day educational seminar is offered on October 15 and 16, at the Roosevelt Hotel. The address of the AAMA is 510 North Dearborn Street, Chicago 10, Illinois.

**ANNUAL MEETING OF ARTERIOSCLEROSIS COUNCIL** — The Council on Arteriosclerosis of the American Heart Association will hold its annual meeting at the Hotel Deauville, Bel Harbour, Florida, on October 13 and 14. Write to the American Heart Association, 44 East 23rd Street, New York, NY 10010.

**AMERICAN HEART ASSOCIATION** — The (38th) annual Scientific Sessions of the American Heart Association will be held October 15-17, 1965 at the Hotel Americana, Bal Harbour, Florida. There will be six programs on clinical cardiology and simultaneous sessions on specialized cardiovascular subjects. Write to local Heart Associations or to the AHA national office, 44 East 23rd Street, New York, NY, 10010.

**MIDWEST INTERNISTS** — The American College of Physicians (ACP) is to hold a regional meeting for specialists in internal medicine in Illinois, Indiana, Iowa, Minnesota, and Wisconsin at the Wisconsin Union Theater in Madison, Wisconsin, on October 16th. Write to John D. McMaster, MD, University Hospitals, University of Wisconsin, Madison, Wisconsin.

**AMERICAN COLLEGE OF PHYSICIANS** — The American College of Physicians will hold its Postgraduate Course No. 3 (The Rheumatic Diseases; Pathology, Diagnosis, and Treatment) from October 18-22, 1965, at the Robert B. Brigham Hospital and the Peter Bent Brigham Hospital, in Boston, Mass. For registration forms and information, write to: Edward C. Rosenow, Jr., MD, Executive Director, The American College of Physicians, 4200 Pine St., Philadelphia, Pa. 19104.

**AMERICAN ASSOCIATION OF AUTOMOTIVE MEDICINE** is sponsoring a medically oriented program of general interest relating to automotive safety and accident prevention at the Mayo Clinic and Mayo Foundation on October 22 and 23, 1965. Write to the Mayo Clinic for details.

## INTERNATIONAL CANCER CONGRESS

—The IX International Cancer Congress will be held in Tokyo, Japan, from October 23-29, 1966. Write to Hirsch Marks, MD, 435 East 57th St., New York 22, N.Y.

## AMERICAN ACADEMY OF PEDIATRICS

—The 34th annual meeting of the American Academy of Pediatrics will be held October 23-28, 1965, at the Palmer House in Chicago. More than 3000 pediatricians are expected to attend. The Academy has its headquarters in Evanston, Illinois, and is the Pan-American association of physicians certified in the care of infants, children, and adolescents. It has almost 8900 members in the U.S., Canada, and Latin America. Write to Dr. E. H. Christopher-son, MD, Executive Director, 1801 Hinman Avenue, Evanston, Illinois 60204.

## DISASTER MEDICAL CARE — The 16th

National Conference on Disaster Medical Care will be held at the Drake Hotel in Chicago, October 30 - 31. Information: Council of National Security, AMA, 535 North Dearborn Street, Chicago, Illinois 60610.

## 1965 POSTGRADUATE COURSES SPONSORED BY THE AMERICAN COLLEGE OF CHEST PHYSICIANS — Clinical ap-

plication of cardiopulmonary physiology: Knickerbocker Hotel, Chicago, October 18-22. Diagnosis and treatment of diseases of the heart and lungs: Barbizon Plaza Hotel, New York City, November 15-19. What's new in the diagnosis and treatment of cardiovascular and pulmonary diseases: Fountainebleau Hotel, Miami Beach, January 24-28, 1966. Clinical application of cardiopulmonary physiology: Ambassador Hotel, Los Angeles, February 14-18, 1966. Cine - angiographic techniques in cardiovascular diseases: Cleveland Clinic, Cleveland, April 11-13. Write to: American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

## THE OMAHA MID-WEST CLINICAL SOCIETY'S 33rd ANNUAL FOUR - DAY POSTGRADUATE ASSEMBLY — Will

convene in the Civic Auditorium, October 25, 26, 27 and 28. This program is acceptable for 32 accredited hours by the American Academy of General Practice.

## ANNUAL OTOLARYNGOLOGIC ASSEMBLY of 1965 — Will be held October 30

through November 5, in the new Illinois Eye and Ear Infirmary at the Medical Center, Chicago. The Department of Otolaryngology of the University of Illinois College of Medicine offers a condensed postgraduate basic and clinical program for practicing otolaryngologists under the direction of Doctor Emanuel M. Skolnik. It is designed to bring to the specialists current information in medical and surgical otorhinolaryngology. Info: Department of Otolaryngology, College of Medicine of the University of Illinois at the Medical Center, Chicago Box 6998, Chicago, Illinois 60680.

## CORNHUSKER CONFERENCE ON SUR-

GERY — Will be held on November 6, 1965, from 9 a.m. to 11:30 a.m., at the Nebraska Center for Continuing Education, in Lincoln, Nebraska. For information and reservations, write to the Department of Surgery, University of Nebraska College of Medicine, Omaha, Nebraska.

## THE INAUGURAL SCIENTIFIC PRO-

GRAM of the new Ancker Hospital (Saint Paul-Ramsey Hospital) will be held on November 11, 12, and 13, 1965. Speakers will include Dr. Martin Cummings (Director, National Library of Medicine), Ernest Lowe (Chief of Obstetrics and Gynecology, D.C. General Hospital), Victor Buhler (President, American College of Pathology), John Haserick (Department of Dermatology, Cleveland Clinic), Robert Hollenhorst (Section of Ophthalmology, Mayo Clinic), J. A. Donaldson (Professor of Otolaryngology, University of Washington), Herman Moersch (Mayo Clinic), Edmund Flink (Professor of Medicine, University of West Virginia), Burtram Schiele (Professor of Psychiatry, University of Minnesota), F.



John Lewis (Professor of Surgery, Northwestern University), and Russell Lucas (Associate Professor of Pediatrics, University of West Virginia). All physicians are invited. Write to James F. Hammarsten, MD, Chief of Medicine, Ancker (Saint Paul-Ramsey) Hospital, Saint Paul, Minnesota.

#### AMERICAN COLLEGE OF PHYSICIANS

— The ACP will hold its Postgraduate Course No. 6: Review of Advances in Internal Medicine, November 8-12, 1965, at Maimonides Hospital of Brooklyn (Kronish Auditorium, 4802 Tenth Avenue, Brooklyn 19, New York), affiliated with State University of New York Downstate Medical Center College of Medicine. Direct requests for information and registration forms to Edward C. Rosenow, Jr., MD, Executive Director, the American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.

**ELEVENTH ANNUAL MID-STATE MEDICAL CONFERENCE**, sponsored by the Buffalo County Medical Society, will be held November 16, 1965, at the Kearney Convention Center at The Holiday Inn, Kearney, Nebraska. The Conference is approved for eight hours credit by the American Academy of General Practice.

**AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS** — The Committee on Injuries of the American Academy of Orthopaedic Surgeons in conjunction with the University of Texas Southwestern Medical School will present a Comprehensive Postgraduate Course on the Treatment of Injuries in Dallas, Texas, at the Marriott Motor Hotel, November 17-20, 1965. For information, write to Charles F. Gregory, MD, c/o American Academy of Orthopaedic Surgeons, 29 East Madison St., Chicago, Illinois 60602.

**FIRST NATIONAL CONFERENCE ON AREAWIDE HEALTH FACILITIES PLANNING, AMA** — Americana Hotel, Bal Harbour, Florida, November 28-29, 1965.

#### Future Meetings of the American College of Surgeons—

**ANNUAL CLINICAL CONGRESS**, October 18-22, 1965, Atlantic City, New Jersey.

— 1966 —

**BAL HARBOUR, FLORIDA**, January 13-15. Sectional Meeting. Americana Hotel.

**HOUSTON, TEXAS**, January 31 - February 2. Sectional Meeting. Sheraton-Lincoln Hotel.

**CLEVELAND, OHIO**, March 14-17. Annual 4-Day Sectional Meeting for Doctors and Graduate Nurses. Sheraton-Cleveland and nearby hotels.

**ANNUAL CLINICAL CONGRESS**, October 10-14, 1966. San Francisco, California.

For any advance information address: Secretary, American College of Surgeons, 55 East Erie Street, Chicago, Illinois 60611.

**ANIMAL CARE PANEL** — 16th Annual Meeting; Sheraton Hotel, Philadelphia; November 15-19, 1965. Contact Mr. Joseph J. Garvey, Executive Secretary, 4 East Clinton Street, Joliet, Illinois 60434.

**THE HAHNEMAN MEDICAL COLLEGE AND HOSPITAL** of Philadelphia offers the following Postgraduate Education Courses during 1965 and 1966:

—November 22-24, 1965; 15th Hahneman Symposium Cancer Chemotherapy; Dr. Isadore Brodsky; Sheraton Hotel.

—December 8-10, 1965: A Hahneman Symposium on New Concepts in Gynecological Oncology; Dr. George C. Lewis; Sheraton Hotel.

—April 20-23, 1966: 16th Hahneman Symposium, Arterial Occlusive Disease; Dr. Albert N. Brest; Marriott Motor Hotel.

—December, 1966: 17th Hahneman Symposium, Nutritional Dysfunction; Dr. Donald Berkowitz; Sheraton Hotel, Philadelphia.

**SECOND NATIONAL SYMPOSIUM ON COCCIDIOIDOMYCOSIS** — December 8-9-10, 1965, Del E. Webb Towne House,



Phoenix, Arizona. For further information, contact: Arizona Tuberculosis and Health Association, Inc., 733 West McDowell Road, Phoenix, Arizona 85007.

**CONTINUING EDUCATION — Closed** Chest Resuscitation; University of Nebraska College of Medicine, at Eppley Research Institute, March 8, 1966 (for physicians, 9th for dentists, and 10th for nurses). Info: Continuing Education, University of Nebraska College of Medicine, 42nd and Dewey, Omaha 5.

**NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS —** "Vision for the Space Age;" Houston, Texas, Rice Hotel, March 24-26, 1966. Info: Director of Information John D. Coleman, 16 East 40th Street, New York 10016.

**SIGHT-SAVING CONFERENCE —** The 1966 annual Sight-Saving Conference of the National Society for the Prevention of Blindness, Inc., will take place from March 30 through April 1, 1966, at the Hotel Roosevelt, New York, N.Y. Write to John D. Coleman, Director of Information, National Society for the Prevention of Blindness, Inc., 16 East 40th St., N.Y.C.

**FIRST ANNUAL BIOMEDICAL LASER CONFERENCE —** June 17-18, Sheraton-Boston Hotel, Boston, Massachusetts.

**TENTH WORLD CONGRESS OF THE INTERNATIONAL SOCIETY FOR REHABILITATION OF THE DISABLED —** September 11-17, 1966, Rhein-Main-Hall, Wiesbaden, Germany.

## Medicare in Operation

Coverage for Drugs and Laboratory Services  
On An Outpatient Basis Under the  
Medicare Program—

Payments for laboratory services are authorized under the program on an outpatient basis only for the following conditions:

1. During the period of antepartum care.
2. Prior to a surgical procedure or bodily injury for which the patient is hos-

pitalized, amount not to exceed \$75. These tests must be essential and in direct connection with the surgical procedure or bodily injury.

3. Post-operatively — here again, the test must be in direct connection with the surgery performed or the same bodily injury for which the patient was hospitalized, and the amount must not exceed \$50.

Payment for drugs is authorized only for the following conditions:

1. Antepartum care — necessary drugs which are administered parenterally by the physician rendering the care may be charged *at cost* to him by listing on the billing form. There is no coverage for administering the drugs.
2. In those instances where the patient is receiving care for bodily injury on an outpatient basis, drugs administered parenterally by the physician are authorized.
3. Drugs administered on an outpatient basis prior to surgery are not authorized, and will be the liability of the patient.
4. Drugs administered by a physician rendering postoperative care on an outpatient basis are authorized providing they are necessary for the proper management of the surgical procedure performed or bodily injury for which hospitalized.

There is no coverage under the program for oral medications, creams, and so on.

## THE MONTH IN WASHINGTON

Despite the flood of major health measures approved by Congress this year, President Johnson apparently plans to propose more important health legislation next year. Health has been given No. 1 priority on the "great society" program, it appears.

Johnson has been telling Congressmen to think in terms of even greater strides next year.

To lay the groundwork for new legislation, he has called a White House Conference on Health Nov. 3-4.

Johnson recently took the occasion of signing two health bills to outline his health goals:

- An increase in the average life expectancy from the present 70 years to 75 years.
- A reduction in infant mortality from the present rate of 25 deaths per 1000 births to 16 per 1000.
- Virtual elimination of polio, diphtheria and typhoid fever and an end to tuberculosis, measles, and whooping cough.
- A reduction of 20 per cent in deaths from heart disease, cancer and stroke — the so-called “killer diseases” that now account for one third of all U.S. deaths.
- Elimination of death and disability among children caused by rheumatic fever and rheumatic heart diseases.
- Eradication of malaria and cholera from the entire world.

One of these two health bills he signed into law authorizes a three-year, 280 million dollar extension of the Health Research Facilities Act. It also authorizes three additional Assistant Secretaries of HEW, one for Health and Medical Affairs. A special assistant to the secretary had been the top official for Health and Medical Affairs.

The other bill amends the Vaccination Assistance Act and extends it for five years. It authorizes Federal expenditures of eight million dollars a year, broadens the program to include measles and any other disease designated by the Surgeon General of the Public Health Service and makes the immunization program a continuing one, rather than “an intensive community vaccination (program) of limited duration.” Expenditure of 45 million dollars during the next five years also is authorized for family health clinics for migratory workers.

Neither the chairman nor the vice-chairman of the White House Conference on

Health is a physician. However, five of the nine members of the executive committee to plan for the conference are physicians. All were appointed by Johnson.

George Beadle, PhD, President of the University of Chicago, will be chairman and Boisfeuillet Jones, former special assistant to the HEW Secretary, vice-chairman.

Physicians on the executive committee are Dwight L. Wilbur of San Francisco, a member of the Board of Trustees of AMA; George James, New York Health Commissioner; Lowell T. Coggeshall, trustee and former Dean of the Medical School, University of Chicago; Montague Cobb, professor of anatomy, Howard University Medical School and former president of the National Medical Association, and Michael E. DeBakey, professor of surgery, Baylor University.

The chief executive said the purpose of the conference is to bring together “the best minds and the boldest ideas to deal with the pressing health needs of the nation.” He said he hopes the conference will develop “creative programs that will bring better health to every American.”

The Food and Drug Administration issued two proposals designed to eliminate possible causes of illness. One called for a reduction in the amount of vitamin D added to food products and the other for pasteurization of commercial egg products.

Last November Dr. Robert Cooke of Johns Hopkins University expressed concern that the ingestion of excessive amounts of vitamin D was a possible cause of infantile hypercalcemia. FDA Commissioner George P. Larrick then invited the Committee on Nutrition of the American Academy of Pediatrics and a joint Committee of the Council on Foods and Nutrition and the Council on Drugs of the American Medical Association to look into this problem.

Both committees recommended that, while there has been no positive demonstration of a cause and effect relationship of vitamin D to this disease, there should be restrictions on the marketing of foods containing added vitamin D.



The committee made clear that there is abundant scientific evidence to demonstrate that an excessive intake of vitamin D is of no value and that 400 USP units per day will meet the full requirements of infants, children and nursing mothers.

Larrick concluded that "prudence" called on limiting the amount of the vitamin added to foods.

The proposal would permit the continued addition of vitamin D to such foods as milk, milk products and infant formulas at a level of 400 USP units per quart. Over the counter vitamin D preparations would be limited to a dosage of 400 USP units of vitamin D per day. Vitamin D preparations containing over 400 USP units per day would be sold only on prescription. The proposal would deny authority for the addition of vitamin D to standardized foods such as enriched flour, enriched corn meal, enriched rice, enriched macaroni products, enriched bread and margarine.

Requiring pasteurization of commercial egg products was aimed at eliminating the possible hazards to consumers from Salmonella bacteria in foods that contain eggs. During the past fiscal year, 220,150 pounds of egg products were seized for Salmonella contamination. Such products are used as ingredients in many other foods, including premixed and ready-to-eat foods that the housewife uses. Egg products containing Salmonella have been implicated in cases of food-caused illness in men.

## Announcements

### Omaha Mid-West Clinical Society—

The 33rd Annual Assembly of the Omaha Mid-West Clinical Society is to be held in the Civic Auditorium in Omaha, Nebraska, from October 25th through the 28th, 1965. The meeting will feature 11 nationally known guest speakers, 32 separate lectures by members of the faculties of Nebraska and Creighton Colleges of Medicine, daily panel discussions, scientific exhibits, technical exhibits, and scientific films. A dinner and style show for physicians' wives is scheduled for October 25, 6:30 p.m., at the Omaha Ath-

letic Club; there will be a dinner for physicians and wives at the Civic Auditorium on October 26, at 5:30 p.m. Address program inquiries to Director of Clinics, Omaha Mid-West Clinical Society, 1040 Medical Arts Building, Omaha, Nebraska 68102. Mrs. Reta M. Crowell, at the same address, is Executive Secretary of the Society.

### Chest Physicians Essay Contest—

Three cash awards will be given annually by the American College of Chest Physicians for the best essay by undergraduate medical students dealing with diagnosis or treatment of diseases of the chest. Write to Mr. Murray Kornfeld, Executive Directive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago, Illinois 60611.

### Blood Research Award to Italian Scientist—

The 1965 Karl Landsteiner Memorial Award of the American Association of Blood Banks will be presented to Professor R. Ceppellini of Turin, Italy, together with a scroll and \$1000, September 16, during the Association's 18th annual meeting at the American Hotel, Bal Harbour, Florida, for "contributions to the field of immunohematology, and especially for emphasis on genetic concepts."

### Occupational Health Contest—

The Central States Society of Industrial Medicine and Surgery announces a competition for a \$250 award for the best manuscript submitted by a medical student, intern, or resident on any subject "pertinent to and concerning occupational health." The contest closes December 31, 1965. Write to: Industrial Medical Association, 55 East Washington St., Chicago, Illinois 60602.

### 19th AMA Clinical Convention—

The 19th AMA Clinical Convention will be held in Philadelphia, Pa., November 28-December 1, 1965. The 200th anniversary of medical education in the United States will be observed at the same time. More than 300 physicians will take part in the four-day program of lectures, motion pictures, color



television, exhibits, fireside conferences, and breakfast roundtables. There will be some 100 scientific exhibits and 30 medical motion pictures. Color television will be shown on the stage of the Civic Center in cooperation with the Hospital of the University of Pennsylvania. Twelve fireside conferences will be held Sunday evening, November 28, at the Warwick Hotel. The annual AMA Conference on the Medical Aspects of Sports will be held on the first day of the meeting, November 28, in the Benjamin Franklin Hotel.

W. Emory Burnett, MD, is general chairman of the meeting. The chairman of the scientific program committee is Donald A. Dupler, MD. For information regarding registration, write to: Circulation and Records Department, AMA, 535 N. Dearborn St., Chicago, Illinois 60610.

#### **AMA Philadelphia Conference and Utilization Committees—**

The seventh annual Conference on Medical Services will be held Saturday, November 27, 1965, in Philadelphia; its theme will be "Medical Staff in Action—1965," the Utilization Committee."

The meeting is sponsored by the AMA's Council on Medical Service and its Committee on Medical Facilities; it will be held in the Bellevue Stratford Hotel and will precede the AMA's 19th Clinical Convention.

For information, write to the Department of Hospitals and Medical Facilities, AMA, 535 N. Dearborn St., Chicago, Ill. 60610.

#### **Seventh Annual Horowitz Lecture—**

Dr. Fritz Buchtal, professor of neurophysiology and director of the Institute of Neurophysiology at the University of Copenhagen, Denmark, has been designated the 1965 Horowitz Visiting Professor of Physical Medicine and Rehabilitation (New York University School of Medicine), and will present the Seventh Annual Horowitz Lecture on Thursday, October 14, in the auditorium of Alumni Hall, New York University Medical Center, 550 First Avenue, New York City, at 4 p.m. The title will be "Physio-

logical and Clinical Aspects of Action Potential Recordings from Sensory Nerve in Man."

## **News and Views**

### **Respiratory Stimulant—**

Dopram® Injectable (doxapram hydrochloride), a potent respiratory stimulant developed in the laboratories of A. H. Robins, is being introduced this month. It is said to be able to stimulate respiration at dosages well below those required to evoke cerebral cortical stimulation; its onset of action is rapid (20 to 40 seconds); it is said to have a wide margin of safety at recommended doses.

### **HOPE's 1965 Christmas Cards—**

Shipping of HOPE's 1965 Christmas cards will start on October first. The cards will include the coats of arms of countries visited by the S. S. HOPE. Proceeds from the sales go to The People-to-People Health Foundation, Inc., the nonprofit parent organization of Project HOPE, which operates the hospital ship S. S. HOPE. Write to Project HOPE's national headquarters, at 2233 Wisconsin Ave., N.W., Washington, D.C.

## **Human Interest Tales**

Doctor Dormond E. Metcalf has opened a practice in Gordon.

Doctor E. C. Westbrook opened a medical practice in Sargent in August.

Doctor Eugene Hermanson opened his medical practice in Coleridge on August 2nd.

Doctor James S. Carson, formerly of Osceola, has opened his medical practice in McCook.

Doctor James Laumond, formerly of San Mateo, California, has opened a practice in Ashland.

Doctor Clifford Hadley, Polk, will open a combined office in Osceola and Polk in the near future.

Doctor Bruce Hutson has joined Doctor F. C. Obert in the general practice of medicine in Red Cloud.

Doctor Noel Haukebo has joined the West Nebraska Psychiatric Unit staff at St. Mary Hospital in Scottsbluff.

Doctor William J. Simic has moved to Alma, and has joined Doctor J. S. Long in the practice of medicine.

Doctor James A. Rogers, Ord, attended the general practice review at the University of Colorado Medical Center.

Doctor Fay Smith, Omaha, was named to the State Board of Health, to succeed Doctor E. F. Leininger of McCook.

Doctor Gordon Hollins, formerly of Rosebud, South Dakota, has opened an office in Norfolk, specializing in pediatrics.

Doctor Samuel H. Perry, formerly of Gothenburg, has moved to Omaha where he is taking a residency in pediatrics.

Doctor John McCammond, Kearney, attended the University of Colorado Medical Center general practice review in July.

Doctor Charlotte Seiver, Fremont, was honored for fifty years of medical practice by the Tri-County Medical Society in August.

Doctor Robert Herpolsheimer, Seward, attended the general practice review held at the University of Colorado Medical Center in July.

Doctor Ellis Baker, Scottsbluff, and Doctor Donald Prince, Minden, attended the general practice review at the University of Colorado Medical Center in July.

Doctor Frank Cole, Lincoln, was elected to the post of President of the Nebraska Society of Anesthesiologists at a meeting of the organization held in August.

## News from Our Medical Schools

### Faculty Promotions—

Dr. John T. Elder has joined the Creighton University School of Medicine faculty, it was announced by Dr. Richard L. Egan, Dean of the School.

Dr. Elder will hold the rank of assistant professor of physiology and pharmacology.

He holds Bachelor's and Master's Degrees in Pharmacy from the Massachusetts College of Pharmacy in Boston and he receives a Doctorate from the University of Washington in Seattle. Dr. Elder joined the University of Washington faculty in 1955 and held a Lilly Fellowship there from 1955-56. He was Assistant Professor of Pharmacology there before coming to Creighton.

Advancements in rank were also announced by Dr. Egan. The faculty members and their new ranks are:

Dr. Ranier Fried, Associate Professor of Biological Chemistry; Dr. Barbara R. Heaney, Assistant Clinical Professor of Psychiatry and Neurology; Dr. Gerald J. Kelly, Assistant Clinical Professor of Radiology; Dr. Hal G. Lankford, Associate Professor of Pathology; Dr. John F. McLeay, Assistant Clinical Professor of Surgery; Dr. Carl L. Moller, Jr., Assistant Professor of Medicine; Dr. Wilbur A. Muehlig, Associate Clinical Professor of Surgery (Neurosurgery); Dr. Elias A. Nachman, Assistant Clinical Professor of Ophthalmology; Dr. Vincent Runco, Jr., Associate Professor of Medicine; and Dr. Louis J. Wilkie, Assistant Clinical Professor of Radiology.

### Doctor Fay Smith to Visit Scotland—

Dr. Fay Smith, Professor of General Practice at the University of Nebraska College of Medicine, has left for a visit with Dr. Robert Scott, Professor of General Practice at the University of Edinburgh. Dr. Scott is the first Professor of General Practice in the world, and Dr. Smith is the world's third professor in this field.

### Psychiatrist on Faculty—

The Creighton University School of Medicine has a new psychiatrist on its faculty.

He is Dr. William P. Egan who has joined the faculty as assistant professor of psychiatry and neurology. A 1959 graduate of the Creighton University School of Medicine, Dr. Egan took his residency in psychiatry at Indiana University Medical Center. He is a native of Decorah, Ia.

#### C. U. Gets Markle Grant—

A \$45,000 grant for expansion of library holdings has been received by the Creighton University School of Medicine from the John and Mary R. Markle Foundation of New York City.

The award will be used to purchase back issues of scientific journals. About 20,000 individual issues of 250 periodicals will be sought. They will add approximately 3,000 volumes to Creighton's medical library holdings.

#### Dr. Lanspa Joins Faculty—

Dr. Eugene F. Lanspa, 3259 South 72nd Ave., has joined the Creighton University School of Medicine faculty as a clinical instructor in obstetrics and gynecology. Dr. Lanspa received his medical degree from Creighton in 1955.

#### Dr. Magee Joins Faculty—

Donal F. Magee, MD, PhD, is the new chairman of the Department of Physiology and Pharmacology at the Creighton University School of Medicine.

Dr. Magee received his medical degree from Oxford University and his PhD from the University of Illinois. He comes to Creighton from the University of Washington at Seattle.

At Creighton he will continue his research on the digestive system. He is particularly concerned with what causes the pancreas to secrete and what stops its secretion.

### Deaths

DELZELL — Doctor William R. Delzell, age 71, died September 8, 1965 at his home in Stamford, Connecticut. Dr. Delzell was born in Lexington, Nebraska and attended the University of Nebraska and Cornell University College of Medicine. He was an attending urologist at The Lenox Hill Hospital in New York City until his retirement in 1954.



## Know Your Blue Shield Plan

#### Important Changes in Nebraska Blue Cross-Blue Shield Coverages—

Beginning October 1, 1965, Nebraska Blue Cross-Blue Shield will begin issuing new agreements or endorsements to present agreements, to all its members. Due to the fact that all members are not serviced or pay in the same month, it will take several months before the transition can be completed. On some negotiated agreements, it will probably take even longer.

All children under age 19 who reside with the subscriber and are dependent upon the subscriber for support will be covered instead of just natural and legally adopted children.

Mentally retarded children will be included in family agreements regardless of age.

Venereal disease will not be excluded.

Mental and nervous, tuberculosis, alcoholism and drug addiction will have coverage for 30 days with an additional 30 days each time 180 days has elapsed between the discharge from and readmission to a hospital.

All waiting periods, including maternity and pre-existing conditions, will be changed to 270 days.

Under Blue Cross 150 series:

- a. Blood plasma and blood substitutes will be covered in the hospital.
- b. Hospital outpatient benefits for accident and minor surgical cases will be paid in full.

A complete new schedule for anesthesiology, pathology, and radiology.

New Participating Physician Manual pages will be mailed to your office sometime the latter part of September. *Be sure and advise your secretary to replace the old pages with the new.*





# Books



**Uterosalingography in Gynecology** by Samuel Rozin, MD. Published August 10, 1965 by Charles C. Thomas, Springfield, Illinois. 366 pages (9" by 11½") with 227 pages of illustrations. Price \$20.50.

The author is Acting Head of Obstetrics and Gynecology at The Hadassah University Hospital in Jerusalem, Israel. He is also Chief of the Clinical and Research Unit on Reproduction in this same hospital. The clinical material on which this book is based must be one of the largest personal series ever studied — more than 10,000 cases. Doctor Rozin emphasizes the important role of uterosalingography in modern gynecological practice — in both physiological and pathological conditions. He critically evaluates the choice of a suitable contrast medium, and he presents an improved technic — showing how to make uterosalingography a more effective diagnostic aid and how to increase its accuracy.

The reproductions of the X-ray pictures are excellent. The literature concerning this subject has been reviewed and compared with the personal experience and views of the author.

**Management of Juvenile Diabetes Mellitus** by Howard S. Traisman, MD, and Alvah L. Newcomb, MD. Published July 22, 1965 by The C. V. Mosby Company of St. Louis, Missouri. 147 pages (7" by 10") with 16 illustrations. Priced \$12.75.

Doctor Traisman is an Assistant Professor of Pediatrics at Northwestern University Medical School. He is also Head of the Diabetes Clinic at Children's Memorial Hospital in Chicago, Illinois. Dr. Newcomb is an Associate Professor of Pediatrics at Northwestern Medical School. The purpose of their book is to provide a concise, practical method of management of juvenile diabetes mellitus. This monograph is written primarily for the pediatrician and the general practitioner who are infrequently called upon to diagnose and treat the infant and child with diabetes mellitus.

They emphasize that diabetes mellitus is a chronic disease of inconvenience, and that proper management of the child with this disorder should ensure normal growth and development and delay the onset of the degenerative complications. They point out that the general medical care of children with diabetes mellitus should differ in no way from the general medical management of their nondiabetic contemporaries. They state that diabetic children should engage in full, unrestricted activity. Readers will find this a very practical book.

**Applied Hypnosis and Positive Suggestion** by George A. Ulett, MD, and Donald B. Peterson,

MD. Published July 23, 1965 by The C. V. Mosby Company of St. Louis, Missouri. 134 pages (7" by 10"). Price \$8.50.

Doctor Ulett is Professor and Chairman of the Department of Psychiatry at the Missouri Institute of Psychiatry (St. Louis), University of Missouri School of Medicine. He is also Director of the Division of Mental Diseases for the State of Missouri. Doctor Peterson is Superintendent of the Fulton State Hospital, Fulton, Missouri.

Chapter headings include the following:

- a. Men and milestones in hypnotism
- b. The nature of hypnosis
- c. Induction techniques
- d. Positive suggestion in the care of patients
- e. Autohypnosis
- f. Hypnosis in surgery — anesthesia and analgesia
- g. Hypnosis in dentistry (hypnodontics)
- h. Hypnosis in obstetrics
- i. Hypnosis in psychiatry
- j. Hypnosis in habit control
- k. Use of hypnosis with children

**Thoracic Surgery, Volume II**, edited by Frank B. Berry, MD. Published in July, 1965 by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 615 pages (7" by 10") with 234 illustrations. Price \$7.25.

This book is the second of the two volumes comprising the history of thoracic surgery in the U. S. Army Medical Department in World War II. Edited by Doctor Berry, this book has been written by nationally known surgeons who actually participated in the dramatic development of this specialty during the war. This second volume deals with special types of thoracic and cardiac wounds, thoraco-abdominal wounds, the complications of these wounds, and surgical diseases of the chest as they were observed and treated in the Zone of Interior general hospitals. The present-day advances in this field had their inception in the lessons and techniques learned and described herein, making this book a comprehensive and particularly valuable reference source for all thoracic surgeons.

The final chapter is unique. It is a follow-up study by Dr. Lyman A. Brewer III, in 1960-1961, of 167 casualties who sustained chest wounds in Italy during 1943-1945. The survival of these men, the X-ray evidence of their healthy thoracic status, and the normal lives practically all of them were living bear witness to the surgical skill and wisdom of the treatment they had received during the war period.

The Keys to Orthopedic Anatomy by William A. Miller, MD. Published September 1, 1965 by Charles C. Thomas, Springfield, Illinois. 155 pages (6¼" by 9¼"). Price \$5.75.

The author is an Assistant Professor of Orthopedic Surgery at the University of Oklahoma School of Medicine. He is also Chairman of the Residents' Training Committee.

This book stresses practical anatomy. It is without pictures or diagrams and must be used in conjunction with an illustrated textbook or atlas of anatomy. The author has presented in concise form the anatomical details pertinent to orthopedic and traumatic surgery. It should be of special value for residents in orthopedic surgery and for candidates for board examinations.

## Tuberculosis Abstracts

### HEPATIC HYDROTHORAX

In a study of a patient with hepatic cirrhosis and pleural effusion, passage of fluid from the peritoneal to the pleural space was traced with serum albumin tagged with  $I^{131}$ . The diaphragmatic lymphatics appeared to be the route. Twelve other cases are also discussed.

The association of hydrothorax with hepatic cirrhosis has been recognized for many years. There is little doubt that hydrothorax can occur with cirrhosis in the absence of manifest chest disease. In most cases reported, ascites was also present. It has been postulated that the transport of ascitic fluid through the lymphatics into the pleural space accounts for at least some of the hydrothorax.

After a detailed study of a case of hepatic hydrothorax, the charts of 200 consecutive cases of hepatic cirrhosis were studied to find the cases with pleural effusion. Twelve, or 6 per cent, were considered to have hepatic hydrothorax when other causes of pleural effusion could be reasonably excluded. The effusion occurred on the right side in 8, bilaterally in 2, and on the left side in 2.

### SPECIAL STUDIES ON CASE 1

Analysis of the peritoneal and pleural fluids in Case 1 showed that they were similar in most respects. Both met the criteria for transudates, with total protein less than 3 grams per 100 milliliters. The total protein was slightly higher in the pleural fluid due to a larger albumin fraction.

Smears prepared from pleural fluid after intraperitoneal injection of India ink showed macrophages containing many carbon particles. Such particles could not be seen in smears of blood obtained at the same time. After intrapleural injection of the ink, there was no comparable increase in carbon particles in the peritoneal fluid macrophages. Samples of peritoneal fluid obtained before and after the intrapleural ink injection had the same optical densities, supporting the impression that no transfer of carbon took place.

### RADIOACTIVITY MEASURED

When radioiodinated serum albumin was injected intravenously in Case 1, radioactivity appeared more rapidly and in greater concentration in peritoneal fluid than in pleural fluid. When similar material was injected intraperitoneally, radioactivity appeared in the pleural fluid and plasma at about the same time and in the same concentration. At 25 hours, the radioactivity per gram of albumin in plasma and pleural fluid was nearly identical, in contrast to results of intravenous study, where at 25 hours the plasma radioactivity per gram of albumin was nearly five times that of pleural fluid. These results suggest that radioactive iodine-tagged albumin was entering the right pleural space directly from the peritoneal space.

After injection of radioiodinated serum albumin into the right pleural space, radioactivity appeared more rapidly and in higher concentration in the plasma than in the peritoneal fluid. At 25 hours, radioactivity per gram of albumin in plasma was 4.9 times that in the peritoneal fluid. This suggests that radioactivity was transported to the peritoneal space via plasma, and there was no direct passage of tagged albumin from the pleural to the peritoneal space.

The source of chest fluid found in association with cirrhosis is unknown. It has been suggested that the fluid may come from the blood stream as a result of hypoalbuminemia or hypertension in the azygous and hemiazygous systems or be secondary to ascites either by direct passage of the fluid through a diaphragmatic defect or by transport of ascitic fluid into the pleural space through the diaphragmatic lymphatics.

### ASCITES USUALLY PRESENT

Hypoalbuminemia as a sole cause can be eliminated for there are many cirrhotic patients and persons with malabsorption syndromes who have low serum albumin levels but never develop hydrothorax. Of the 200 cases of cirrhosis reviewed, serum albumin levels were obtained in 179. There was a significant difference between the mean serum albumin levels for those cirrhotic patients without ascites and the two other groups composed of patients with ascites alone and with both ascites and hydrothorax. There was no significant difference between the groups with just ascites and the group with ascites and hydrothorax.

Although it seems clear that hypoalbuminemia and azygous hypertension play some role in the etiology of hepatic hydrothorax, these factors alone cannot explain all cases.

The more probable explanation is that hydrothorax is derived directly from the peritoneal fluid. Ascites is present in nearly all cases of cirrhosis when hydrothorax is recognized. All 13 of the cases in this series had ascites, and though there have been reports of hepatic hydrothorax occurring in the absence of ascites, these are rare. It would appear that ascitic fluid passes into the pleural space either through a defect in the diaphragm or via the lymphatic channels that penetrate it.



Data from the present study, suggesting that hydrothorax was not formed exclusively from plasma or as the result of a diaphragmatic defect, are compatible with the theory that chest fluid is the result of transdiaphragmatic transport of ascitic fluid by the lymphatics.

If it is correct that hepatic hydrothorax is secondary to transdiaphragmatic transport of ascitic fluid in the lymphatics, the question must be answered why hydrothorax does not occur in all patients with ascites. Pleural effusion will not be manifest until the rate of formation of pleural fluid exceeds the rate of fluid absorption from the pleural space.

Even in normal man it is likely that pleural fluid is being constantly formed, but an equal rate of absorption prevents accumulation of fluid. In the presence of ascites, the rate of pleural fluid formation appears to be greater than normal. If, in addition, hypoalbuminemia is present, the rate of reabsorption of water from the pleural space will be decreased. If the rate of formation exceeds the rate of absorption, hydrothorax will occur. The probability it will occur will be increased if there are local factors such as azygous hypertension which impedes the absorption of water or obstruction or increased pressure in the thoracic lymphatics which reduces protein absorption.

—Robert F. Johnston, MD, and Rodolfo V. Loo, MD, *Annals of Internal Medicine*, September, 1964.

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## THE NEBRASKA STATE MEDICAL JOURNAL

## MEN OF LETTERS

What a strange world is ours: it is highly technical, it is often characterized by crisis, and it has somehow developed a language of its own. A great amount of writing has become necessary and so, perhaps, abbreviations are now commonplace. But communication is more important here than elsewhere, for lives depend on it, and it too often falls victim to meaningless jargon (as in Fowler's novelty hunting and popularized technicalities) and to imperfect speech. To be told by someone who has not seen the patient that I believe she is doing well is to be misled and to be done a disservice; to write that someone is alive and well as far as we know, after cancer surgery, is to invalidate the series and to destroy the study. It is especially easy for crisis to become chaos and finally disaster when our speech becomes imprecise and our thinking imperfect. The use of pronouns and adverbs may prove costly when time is precious, as in being asked by someone just out of sight if this may be taken away, or that turned off, or this put over there. The word *right* is one that probably ought never to be heard in an operating room: if we mean correct, we should say *correct*; and when we refer to position, it is far safer to say that the *left* side will be up or down, and thus to leave no room for error. The less than perfect mind will always reach for the more complicated expression; thus we hear dorsal recumbent for supine, with the assumption that the two are synonymous and the former more elegant. *Left lateral* (is the left side up or down?) and *kidney position* are less logical, particularly when we are not operating on the kidney, than *on the side*. *Put the head down* seems simpler and better than asking for Trendelenburg's position, which is not at all the same thing.

In critical times, it is easy to panic and to become fatally inefficient. If to panic we add hopelessly poor communication, we may indeed pay a rich price for poor speech. Silence may be as bad or worse;

it is frustrating to find a much-needed pint of blood where somebody has quietly left it long ago and noiselessly tiptoed away. And with all this we have acquired a jargon that cannot but offend the more sensitive ear. Patients are admitted ambulatory and without ambulance, they have a good noc and respond verbally, while they show the effects of trauma. They go into shock or into a shock-like state or are shocky, and it is difficult to the point of absurdity to know what the writer means by any of this. It is easier and better to write admitted in (or on or by) than per wheelchair, but per fairly leaps from the pen of many chart-fillers who never use it when speaking; per ambulatory is probably as bad as this can get.

Now we are plagued with tracheostomy used indistinguishably for either of two procedures, with "perceptive reports" and "discussions in depth;" with meaningless words like basically and potentially, and with a whole new world of abbreviations that drive us to the dictionary without success, and to the nearest dram-shop. It may at times prove to be an imposition when someone uses an unintelligible contraction to save time, when we must repay the time by spending it in word-hunting. NBM may mean nothing by mouth, and it may not. CVA may refer to a cerebral vascular accident or to the costovertebral angle. AP may stand for appendectomy or for antero-posterior. MS can mean morphine sulphate or multiple sclerosis. It is easy to confuse gm. (instead of Gm.) with gr. PH means one thing and pH quite another. PP may signify postpartum or pinpoint or postprandial; or pauperismus, but that has become a lost word. We have become accustomed to RLQ, IVP, VAH, cps, AMA, and to PRN. CA sounds like cancer and like chronological age. "Stat" may stand for immediately, but it is no improvement over the perfectly good English word "now."

Some of this is good, of course. "NPO at HS" saves us hours of writing. IV, BP, CBC, GI, IM, q 4 h, GU, BRP, OOB, PE,



CC (chief complaint, compound cathartic, or cubic centimeter), T & A (our surgeons do an A T & T), and even "lap" have kept many of us from writer's cramp. Whole sentences may be desirable on progress pages or they may be unnecessary. But it is becoming increasingly difficult to read case records. We have learned to keep up with H & P, ECG, L K & S, no M or T, EEG, KUB, psi, and PKU. We understand EOM, A/G, R R & E, L & A, D/W, M and m, nor— and mEq. The discovery of the vitamins and the Roentgen ray led to a wholesale attack on the English alphabet, for better or for worse; A, B, C, and D seemed an improvement over longer names, but B<sub>12</sub> becomes confusing, and it is hard to understand why vitamins, and they alone, should have appropriated the alphabet, without the acquisition of simple generic names. FSH, LH, ISCH, LDH, and LTH require looking-up; ACTH has come into commoner use; CRF, U/F, BSP, APL, and DBI have not. Then there are URI, CF, BR, RRR, R/O, CHF, A & P, RR, PMH, FH, PTA, CSF, UCD, ICF, CW, and LE. GYN, hpf, EENT, KVP, #20 at L3, VC, SDA, q.s, and MLD are old stuff. Va., u.v., mm.p.p., p.p.m., QTr, U<sup>235</sup>, mM., and I<sup>131</sup> are more difficult. A° and † and c & s (we knew CNS) baffle us, along with V. & T., T<sub>3</sub>, DPN, and BB units. HR, PL, and S are new.

But the most wonderful of them all are the acronyms. And now we have TRY, BUN, SOB (probably shortness of breath), LARC, SOS, TID, USAN, PA, AHA, EDTA, BAL, SGOT, BID, OR, PABA, and NAD and GOK.

A great deal of this is of course inevitable (we may be seeing a lot of YOO-OOO's disease) and some of it may be good; just so we remember to M. TLC with our DX and RX.

—F.C.  
(Not Fahr. and Cent.)

### WONDER DRUGS

We none of us practice what we learned. The vast majority of drugs we use today did not exist or were unknown to us when

we were in school; techniques that make up the greater part of our practice had not yet been invented. It makes one wonder why we were required to learn enough about smallpox to write a proper examination paper, when we do not see a case all our lives. But as in calculus, the changes change. During our own medical lifetime, too many agents and methods have appeared with the "wonderful" label, only to be forgotten or replaced, or simply abandoned. We have become tired to the point of suspicion of hearing of wonder drugs. Many of them were not at all wonderful. A great deal of what someone once considered miraculous has become commonplace.

Here and there, wonder drugs have accomplished a great deal, only to be replaced, like sulfonilamide, by other agents with similar curative properties. But the appraisal of a new and only available antibiotic is entirely different from what we consider its life-saving properties today, when there are other and apparently better things; yet with all of this, the drug and its properties remain the same.

Some agents considered better than anything available at the time of their introduction become associated with unanticipated side effects and are used less frequently or are withdrawn. Thalidomide comes to our mind, but it is probably not alone. Antibiotics have in some instances been associated with untoward reactions and have later been employed with greater caution and with more knowledgeable watching for symptoms.

Sensitivity, both natural and induced, has become associated with the use of modern drugs, and has led again to their being used cautiously or not at all in some cases; penicillin is suggested in this group.

Some antibiotics have solved one problem only to create another, as other strains of organisms, more difficult to combat than those formerly encountered, appeared as the drugs were used.

Hepatotoxicity may unfortunately be characteristic of several drugs recently introduced. The need for some of these



agents may very well have been exaggerated. Unfortunately, so many were ushered in almost simultaneously in each field; and several different kinds of at least possibly hepatotoxic substances have been administered to the same patient at the same time, so that the possibility of injury to the liver has been enhanced, while medical detection becomes increasingly difficult to the point where the culprit cannot be singled out.

Finally, there are the tranquilizers. They were thought by many among us and by those who consumed them to be truly wonder drugs; they are said in recently published books to be little if at all better for purposes for which they were or are being used than older drugs, as the barbiturates; they have been considered quite recently to have little effect.

We have heard enough about wonder drugs during our experience to become skeptics; the name alone is one to make us pause and reflect, to remember and doubt. But there is one argument put forth for new drugs that will never cease to offend us. We have heard it often and we have become unbelievers. It is the statement that a new analgesic is not habit-forming. Habituation and addiction are serious and not quite synonymous words. When a drug is new, of course, it has not had time to create its world of habituates. Meperidine was thus proudly introduced as a non-addictive drug. Anything that can make someone feel better can be habit-forming. And to say that a new drug is not associated with habituation is as misleading as to state that a patient who has undergone cancer surgery a year ago is alive and well as far as we know, when the statement itself is enough to tell the most incurious of readers that the patient may have already succumbed to the disease.

We make progress with wonder drugs; but for them we should be practicing as our predecessors did. We decry the cheap and too-ready use of the term, we are reminded of drugs whose wonder soon disappeared, we have learned to think of side-effects and sensitivity, and we have come to doubt premature and unfounded claims for nonad-

diction. Let us continue to welcome new things, therefore, with a healthy skepticism, but never without hope and appreciation. "Be not the first by whom the new is tried, nor yet the last to cast the old aside."

—F.C.

## THE SPECIAL CONVENTION

It is our opinion that Medicare passed into law (HR 6675 to PL 89-97) through something other than the democratic process. The October 1965 Special Convention of the AMA House of Delegates was, contrary-wise, as Mr. Dodgson used to say, a splendid example of democracy in action. It was called after written requests were received from 37 delegates from one third (18) of the constituent associations, as provided in Chapter IX, Section 5 (D) of the AMA By-Laws. The Report of the Reference Committee on Legislation and Public Relations, as Amended, is soon to be public knowledge. Forty-three resolutions were introduced; House Speaker Rouse, Board of Trustees Chairman Hopkins, and AMA President Appel spoke; 125 witnesses were heard during more than seven hours of testimony on 20 subjects; and the issue was Medicare. Utilization committees, reasonable fees, direct billing, shortage of hospital beds the advisory committee, nondiscrimination, Blue Shield, and HR 3140 were discussed, but Medicare was paramount. We were impressed by the remarks of Mr. Hodson, our legal advisor; we may apparently do as we like as individuals; we may not, in concert. Well, the "nons" among us may relinquish this kind of unity, but we have achieved another, and a better, and a real kind of unity while we were in Chicago. Unity appeared in at least three different resolutions and in the remarks of the President. Those who served included the Reference Committee on Legislation and Public Relations, the Judicial Council, the House itself, the Advisory Committee, the Medical Council, the Council on Medical Service, the Board of Trustees, our legal counsel, and the Council on Legislative Activities. Those

who attended were AMA members and State Medical Association officers and editors from everywhere. We achieved unity; we acquired knowledge; we will have something to say about coming regulations; we are on surer footing; and we stand together. We thank the Reference Committee and the House. This was not an October Revolution, nor was it a lost weekend. It was a splendid meeting. It may have been our finest hour; we shall remember it long.

We wish Mr. Johnson could have been there.

—F.C.

### EARLY DETECTION OF DIABETES

Diabetes Detection Week comes around only once a year. This is about as ridiculous as Mother's Day once a year — possibly Father's Day is not a good comparison! But diabetes detection should be a continuous effort just as appreciation and love of mother should be a continuously manifested feeling.

It is estimated that there are at least two million undetected, mild, or potentially diabetic persons in the United States. These cases are so mild that apparently no symptoms of the disease process have become apparent; and to discover these cases, it has been necessary to use rather refined and sophisticated tests. Possibly the most refined and sensitive test is the cortisone-glucose tolerance test. The gluco-corticoids have for some time been known to be antagonistic to insulin. A measured dose of cortisone preceding a glucose tolerance exerts an extreme test of the body's ability to use insulin for the duration of the test.

A pertinent and disturbing question may be asked at this time. "Since we are unable at this time to control the inevitable vascular and neurologic complications of diabetes, why worry about those patients who will never have any problems with their mild diabetes until the complications occur in 10-15 years?"

I believe that we are beginning to be able to give at least a creditable answer to this question.

First — minimal degrees of diabetes can produce protean symptoms; i.e., diarrhea, neuritis, bladder dysfunction, and predisposition to pyelonephritis. Thus an obscure etiology of a disturbing disease process may be detected.

Second — a patient with the known potential of diabetes may be able to practice some preventive medicine with a good reason. Weight control to prevent the development of overt diabetes is important. Special attention will be paid to fat metabolism which is generally deranged in the diabetic, with its implications as far as vascular diseases are concerned. Stress situations will not get out of hand before the situation is recognized. Pregnancies will be watched carefully. When the causes of the associated vascular complications are detected, a known group of patients suitable for therapy will be ready.

Accordingly, there are good reasons for detecting the early or potential diabetic, even in the face of the present knowledge of this disease. Therefore, it is essential that a continuous search for diabetics be continued. A cortisone-glucose tolerance test may seem quite sophisticated in the ordinary day-to-day practice of medicine; however, the well known effect of stress on diabetes can be substituted for the cortisone-glucose tolerance test. The blood sugar under the stress of surgery, injury, or infection can be used to detect diabetes. A simple urine specimen after an accident may be the opening key to this diagnosis. A postprandial blood sugar during a bout of pneumonia may be positive and establish the diagnosis of diabetes. Therefore, it is simple in our daily medical practice to reproduce a sophisticated laboratory test for diabetes without much fuss or cost to our patients. When trying to discover diabetes, always test the patient at the time of greatest stress, generally a postprandial blood sugar.

C. R. Hankins, MD



# When Do We Do A Breast Biopsy?\*

**A**S a general surgeon speaking to an obstetrical and gynecological group, I first wish to thank you for the privilege of being able to discuss with you some of the problems in breast disease.

For several years, at least at the Clarkson Hospital, a gentle feud has existed between certain of the surgical spheres. I am a bit reticent to recognize some of the historical developments, especially with the long memories that some of you have.

Be that as it may, the gynecologist was faced 20 years ago with cancer of the cervix. It was the number one cause of cancer deaths.<sup>1</sup> It since has been comparatively well controlled, and now is replaced by cancer of the breast as the number one cause of cancer deaths. The surgeon has not been as successful as you. Indeed the general outlook is little better today than it was when Halsted got things going many years ago. We believe that more doctors are better trained, better equipped, and with many more facilities, and yet the five year survival rate is no better the last ten years than during the preceding ten year period.<sup>2</sup> It is not surprising that much confusion and indecision exist. There are advocates of simple and of super-radical surgery, with and without radiation therapy or chemotherapy, and all possible shades and variables between these extremes.

Some basic information might be desirable for further discussion purposes. Statistics on breast cancer survival in the untreated are based on the first knowledge of a lump. Under these circumstances there is an expected 18 per cent five year and 4 per cent ten year survival.<sup>3</sup> In those patients who are treated surgically, the five year times are based on the day of surgery. This may alter the comparative figures by months to a year or two. A series from the University of Michigan<sup>4</sup> showed a 51 per cent overall five year survival and where no lymph node involvement was found on the pathologic tissue submitted the survival reached 85 per

JOHN A. RASMUSSEN, MD  
Omaha, Nebraska

cent. It is my personal feeling that these figures may be somewhat optimistic by about 10% when a broad perusal of such series is carried out.

There are essentially 50,000 new cases of breast cancer seen yearly.<sup>2</sup> To accomplish in cancer of the breast what has been done in cervical carcinoma will necessitate either an attainment of earlier diagnosis or a new mode of therapy.

To secure earlier diagnosis it will be mandatory to encourage self-examination by the patient. The physician should instruct all of his female patients of reasonable intelligence and stability as to the proper technique, by palpation with the flat of the fingers once each month, or every other month will suffice. This should be done just after a period. The patient often will feel quite small lesions and the physician is wise who pays particular credence to suggested areas. Often the patient will spot an area that a careful examiner might miss.

The technique of the medical examination is of importance and will be reviewed. I am sure that inadequate or rough or poorly executed examinations will often result in the wrong diagnosis and a needless and perhaps fatal delay. We have based our approach on the one well described by Dr. Haagensen.

The breasts are evaluated with the patient sitting, and by inspection changes in contour or symmetry are obvious. Retraction of skin or nipple or alteration in the areola become apparent. By pectoral muscle contraction or by elevation of the arms over the head, evident skin retraction is noted. We next have the patient bend forward, allowing the breasts to fall away from the body wall by gravity. Symmetry and retraction deviations from normal become

\*Presented at the Tenth Meeting of the Nebraska Obstetrics-Gynecology Society, Las Vegas, December, 1964.



quite apparent. The patient is finally examined lying supine. With the flat of the fingers, examination is carried out for masses. Particular care is given to any area suspected by the patient and the upper outer quadrant. If a mass is felt, skin retraction can often be demonstrated by gently lifting the breast or by molding it.

This brings us to the point of when does one biopsy lumps in the breast. In general, all dominant masses in the breast, especially when single, should be removed. One should avoid a decision in the immediate premenstrual and menstrual days in questionable lesions and recheck the patient in two weeks.

In the very young woman with the typical fibroadenoma, that is, circumscribed, very mobile and multiple masses, we often reassure the family and follow the patient. In a smooth dome-like mass that is movable and slightly tender and a part of a rosy breast, we will aspirate the cyst. If the fluid is clear, and the mass completely disappears and does not return, one can reasonably follow the patient on an out-patient basis. This technique is most useful in the patient who has had a previous microscopic diagnosis of cystic disease made by biopsy. Indeed the responsibility is great in the management of lesions by this method. One can ill afford an error as the stakes are most high, and with the slightest doubt excision is the wisest course. Contributing to this are several factors. One problem is that the patient can have cystic disease and cancer of the breast. Secondly, one may reassure the patient today and because of that a year or two later the patient may return with an untreatable situation of an entirely new lump, but by misunderstanding and inadequate periodic checkups, the patient is lost.

Apropos of this is a report from Dr. Wright in Cleveland. Ninety per cent of the lesions are diagnosed correctly preoperatively but 21 per cent of the malignant lesions were in the group considered benign preoperatively. This margin of error cannot safely be ignored.

Finally a word about mammograms. In a

situation that is as difficult as this, we feel that there are times when this procedure is most helpful. In cases that seem clear-cut on physical examination, such as a single, dominant, irregular, hard mass for which one always is going to recommend removal, the study is not really of much help. In the opposite situation of a large breast with the suggestion of a mass or a suggestion of skin dimpling, the X ray may point to a lesion that demands surgical removal. I truly feel that this study will not reduce the need for biopsy but may well increase the frequency of it.

Finally, a few special situations will be mentioned. Breast cancer in pregnancy is considered especially bad. In most cases, the problem is found by the patient in spite of repeated prenatal visits, and in general there is a physician delay in treatment much greater than in the nonpregnant patient. The implications are obvious. The physician needs to respond to the patient's question of a lump by repeated, careful breast examinations during the prenatal period, and when lumps are found a biopsy should be carried out. Finally with inflammatory carcinoma being more commonly seen in the pregnant state, errors in the diagnosis and treatment with antibiotics and hot packs must be avoided. During the pregnant state, fibroadenomas are prone to grow rapidly, but they remain mobile and well encapsulated while cystic disease tends to disappear during these months. The same basic concept of biopsy and removal of dominant lumps must be carried out to avoid tragic problems.

One can conclude that until better methods of therapy are developed, the greatest achievement available is earlier diagnosis.

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# Carcinoma of the Cervix in Indian Women

## Introduction

**I**NFORMATION on carcinoma of the cervix in the American Indian is at a premium, because few studies of this type have been published. There are only three such studies, one on Indians in general and two on Indian women in the southwestern part of the United States. There have been no published studies conducted on Indian women in the midwest. The Creighton University School of Medicine by contract agreement with Indian Health Agencies in the midwest region has for some time been responsible, through its Departments of Pathology and Obstetrics-Gynecology, for the reading of Papanicolaou smears of the cervix and diagnosis of a large number of the subsequent biopsies. A part of this source of information was used to prepare this paper on carcinoma of the cervix in 1127 midwestern Indian women through a study of 1596 cytology examinations.

In 1956 Smith, Salsbury, and Gilliam<sup>1</sup> found through a study of death certificates of the Window Rock Agency from 1948 to 1952 that their data was "consistent with the belief that the Navajo experience a deficit of cancer as a whole . . ." Smith,<sup>2</sup> in studying mortality rates in the American Indian with reference to cancer, found the cancer mortality for both sexes to be significantly lower than found in whites and non-whites. For females he found a higher mortality for cancer of the liver and pancreas compared to the rates for whites and nonwhites, and for the cervix when compared to the rates for white females. His 92 recorded Indian deaths from carcinoma of the cervix was lower than the 112.2 expected from studies of nonwhite rates and higher than the 49.0 expected from studies of white rates.

In a follow-up study on the low rate of malignancy in the Navajo, Darby and his associates<sup>3</sup> studied the dietary background and

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nutriture of this group of Indians. The Navajo was found to have a nutritional level similar to that of other populations investigated. They write, "There is no pronounced peculiarity of the nutriture which in our present state of knowledge one might seize upon as a likely explanation of any true difference in malignancy rate which may exist between the Navajo and other groups." They proposed the hypothesis that genetic influence rather than a dietary one is a more likely explanation stating, "This conclusion is similar to that entertained concerning the low incidence of cervical cancer among Jewish women."

Salsburg and his associates<sup>4</sup> in 1959 studied malignancy in general in the Navajo by clinically sampling the population as fully as possible, with emphasis on carcinoma of the lung and female pelvis. Of the 256 individuals studied by Papanicolaou smears of the cervix, the authors found "no invasive carcinoma, 3.9 per thousand intra-epithelial carcinoma, and 27.34 per thousand atypical or precancerous lesions." Although the mortality from malignant disease is low in this population, the morbidity rate of possible disease approaches one third of the 256 individuals studied. Disagreeing with Darby, the authors conclude, ". . . that a factor other than genetic is responsible for the

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deficit of malignant disease in the Navajo, and a hypothesis for this theory is indicated."

In the most recent study, Biven and his associates<sup>5</sup> studied the hospital charts of 17,617 Southwest Indian women. Carcinoma of the cervix was found to occur at the rate of 3.24 cases per 1000. Also studied were 1171 cytology smears taken from Indian women in the same area. In this series, one was reported positive and proved to be a Stage III carcinoma of the cervix. Of the seven reported as "suspicious" and studied by biopsy, one had an early Stage I carcinoma of the cervix. These authors believe the low incidence of early carcinoma of the cervix diagnosed by the cytology smear is directly related to the reluctance of the Indian to undergo periodic examinations or to have the pelvis examined unless there is a pelvic complaint. After a comparison of their results with those of several studies on women in general the authors state, ". . . it appears that Indian women of the southwest, although they marry early, have many babies, have uncircumcised male partners, and are below the average economic level, have an incidence of carcinoma of the cervix similar to that among other women."

### Population Traits

The great majority of the population studied in this paper reside in the Aberdeen Indian Health Area.<sup>6</sup> Within this area there are some 61,000 Indian people. Seven states are included: Nebraska, North Dakota, and South Dakota in the northwest; and Iowa, Michigan, Minnesota, and Wisconsin in the Great Lakes region. The Great Lakes region in this study is represented by Iowa and Minnesota, but is limited to a small sample of patients.

About 37,000 of these people live in the three northwestern states. The largest Indian population, some 22,500 live in South Dakota, 11,500 in North Dakota, and 3,000 in northern Nebraska. About 24,000 live in the Great Lakes region.

The Indians in Nebraska and the Dakotas are primarily Sioux or of the Siouan linguistic family. The South Dakota population

is nearly entirely Sioux. In North Dakota the Sioux predominate, except for the Chippewa at Turtle Mountain and the Arikara, Mandan, and Hidatsa at Fort Berthold. The Nebraska Indian is primarily of the Siouan linguistic family.

Most of the Aberdeen Area Indians are economically poor. Most families live in a poorly repaired frame home, use unapproved water sources, and have a low income. Few homes have electricity, refrigerators, or running water. Formal education throughout the area is low.

### Method

Cervical smears were obtained on patients seeking medical attention by physicians charged with Indian health care at various reservation hospitals. One or more smears were obtained from each person, including a posterior fornix aspiration, cervical scraping, and cervical os aspiration. The smears were fixed wet in a solution of equal parts of ether and 95 per cent alcohol. These were then transported with a brief clinical history to the Creighton University School of Medicine, Omaha, for processing and evaluation. The smears were stained by the standard Papanicolaou technic and were studied and classed by one of us (J.S.) in conjunction with the Department of Pathology.

The following classification, which is the standard system of classification at Creighton University for gynecological smears, was used:

- Class O — No reading is made due to poor fixation, insufficient material, or some other reason.
- Class I — Negative. There is an absence of atypical cells in this material.
- Class II — Negative. Atypia present in cells are inflammatory and not suggestive of dysplasia or malignancy.
- Class III — Marked atypia, abnormal cells:
  - a. Suggestive of dysplasia or other atypias.
  - b. Abnormal cells (suspicious).



c. Indefinite and inconclusive.

Depending on degree of cellular abnormality the physician is always requested to repeat the smear, or take a biopsy, or do both.

Class IV — Abnormal cells usually suspicious for in situ carcinoma: biopsy and D. and C. indicated.

Class V — Extremely abnormal cytology with definitely cancerous type cells. Suspicious for invasive carcinoma. Biopsy and D. and C. indicated.

An alphabetical name file and cross file by case number of all patients examined is maintained in the cytology laboratory. In choosing the subjects for this study all Indian cases found in the file were selected, proceeding alphabetically. On a given date set as a deadline for gathering data, examination of the file was terminated and results compiled. Using this method, 63 per cent of all Indian cases filed here were included in this study. A total of 677, or one third of all cases, remain to be studied. Since every Indian case was included in the study, the statistics gathered are probably true of Indian women in general in this clinic.

All statistics presented in this paper were gathered from the clinical histories and cytology reports on file at the Creighton University Department of Pathology. The data was transferred to standard IBM punch cards for sorting and evaluation.

## Results

The data here presented represent the evaluation of findings obtained from a total of 1596 cytologic examinations on 1127 Indian women. Actually, the assumption that all the cases are Indian must be qualified, since the patient's race could not be found for 32 of the examinations. Because all the

cases came from an Indian reservation and were prepared by physicians in the Indian Public Health Service, it is presumed that these 32 are Indian women. With the exception of one examination done in March, 1950, the time span involved extends from January, 1953 through October, 1963.

Following the classifications above, Table I lists the number of cytologies found in each class. If Classes I and II are combined and considered negative, then a total of 1496 or 93.7 per cent of the examinations fall into this group. In like manner, 64 or 4.0 per cent of the examinations fall into the suspicious group made up of Classes III, IV, and V.

The majority of patients, 60 per cent, were examined for a period of one year only. Although most received but one cytologic examination, one case had seven in a year and another eight in the same period of time. Three cases were followed over a period of seven years, each receiving three cytologic examinations. In the longest follow-up in this study, one woman received seven examinations over a period of eight years.

In determining the willingness of the Indian female to submit to examination, it was found that in 66.9 per cent of the cases, a condition existed which could be considered a subjective reason for the examination (Table 2). These reasons were vaginal bleed-

Table 2  
SUBJECTIVE REASON FOR EXAMINATION

|                                 | Number of<br>cytologies | Per<br>cent |
|---------------------------------|-------------------------|-------------|
| 1. Bleeding -----               | 290                     | 18.2        |
| 2. Discharge -----              | 351                     | 22.0        |
| 3. Pregnant -----               | 358                     | 22.4        |
| 4. Postpartum -----             | 68                      | 4.3         |
| 5. No reason or no record ----- | 529                     | 33.1        |

Table 1  
CLASSIFICATION OF CERVICAL CYTOLOGIES IN  
INDIAN FEMALES

|                | 1953 - 1963 |      |      |     |     |     |
|----------------|-------------|------|------|-----|-----|-----|
| Class          | 0           | I    | II   | III | IV  | V   |
| Number -----   | 36          | 1187 | 309  | 38  | 18  | 8   |
| Per Cent ----- | 2.3         | 74.4 | 19.4 | 2.4 | 1.1 | 0.5 |

Table 3  
AGE DISTRIBUTION OF CYTOLOGIES BY CLASS

| Age            | 0  | I    | II   | III  | IV   | V    | Total |
|----------------|----|------|------|------|------|------|-------|
| 10-19 -----    | 1  | 97   | 13   | 0    | 0    | 0    | 111   |
| 20-29 -----    | 4  | 440  | 68   | 12   | 4    | 0    | 528   |
| 30-39 -----    | 10 | 263  | 91   | 13   | 4    | 2    | 383   |
| 40-49 -----    | 4  | 171  | 53   | 6    | 2    | 2    | 238   |
| 50-59 -----    | 8  | 75   | 40   | 5    | 5    | 3    | 136   |
| 60-69 -----    | 4  | 41   | 18   | 2    | 1    | 1    | 67    |
| 70-79 -----    | 2  | 40   | 10   | 0    | 1    | 0    | 53    |
| 80-89 -----    | 1  | 5    | 3    | 0    | 0    | 0    | 9     |
| Unknown -----  | 2  | 55   | 13   | 0    | 1    | 0    | 71    |
| Total -----    | 36 | 1187 | 309  | 38   | 18   | 8    | 1596  |
| Mean Age ----- |    | 34.4 | 39.5 | 37.5 | 43.2 | 48.3 | 34.3  |

ing or discharge, pregnancy, and post-partum care. The remainder (33.1 per cent) either had no complaint or the complaint was not reported on the clinical history sheet accompanying each specimen.

The mean age of the population in this study is 34.3 years. The largest number of people, 528, fall into the age group from 20 to 29. The number of people with an age of more than 70 years is 62. When the average age is calculated for each class, an increase is seen with the youngest age in Class I and the oldest in Class V. Class III is the only exception with a slight decrease in this group. Table 3 shows age distribution by cytology class.

The number of cytologic examinations and biopsies performed on patients at each reservation is listed in Table 4. Eagle Butte of the Cheyenne Agency leads the list with

Table 4  
SOURCE OF EXAMINATIONS

| Examination Source  | Number of cytologies | Per cent | Number of biopsies |
|---------------------|----------------------|----------|--------------------|
| Eagle Butte -----   | 561                  | 35.2     | 29                 |
| Winnebago -----     | 374                  | 23.4     | 13                 |
| Rosebud -----       | 183                  | 11.5     | 6                  |
| Sisseton -----      | 99                   | 6.2      | 2                  |
| Fort Yates -----    | 61                   | 3.8      | 2                  |
| Pine Ridge -----    | 41                   | 2.6      | 1                  |
| Fort Totten -----   | 34                   | 2.1      | 1                  |
| Chamberlain -----   | 33                   | 2.1      | 0                  |
| Wagner -----        | 12                   | 0.7      | 0                  |
| Belcourt -----      | 11                   | 0.7      | 0                  |
| Fort Berthold ----- | 2                    | 0.0*     | 0                  |
| Other -----         | 68                   | 4.3      | 0                  |
| Unidentified -----  | 118                  | 7.4      | 0                  |
|                     | 1596                 | 100.0    | 54                 |

\*—Less than 0.005 per cent

35.2 per cent of all examinations and 29 patients biopsied, followed by Winnebago with 23.4 per cent and 13 patients biopsied. Grouped into the heading "other" were examinations on Indian women not residing on a reservation e.g., Omaha and surrounding areas, Rapid City, South Dakota, etc. No precise source of the examination could be identified on 118 cytologies.

The number of pregnancies, marital status, and vaginal bleeding and discharge in the negative group (Class I, II) and the suspicious or more groups (Class III, IV, V) is shown in Table 5. The fact that more married women and women with children appear in the suspicious or positive group may be due to their higher mean age. Of the women in the negative group, 57.6 per cent have been pregnant three or more times. In the suspicious-positive groups, 71.9 per cent have had the same number of pregnancies. This too could possibly be related to the older average age of the positive group. Vaginal bleeding occurs much more frequently in Classes III to V than in the negative classes. Discharge probably occurs much more frequently in the suspicious-positive groups than indicated, since in 25 per cent of these cases there was not enough information to decide whether or not it truly existed.

Probability studies indicate a greater than chance relationship between bleeding and discharge and cervical carcinoma. There is only chance relationship, however, between pregnancies and marital status and carcinoma.

The sexual status of these two groups correlate well with the age factor. As illus-

Table 5

THE RELATIONSHIP BETWEEN NEGATIVE AND POSITIVE  
GROUPS OF MARITAL STATUS, PREGNANCIES,  
AND VAGINAL FINDINGS OF BLEEDING  
AND DISCHARGE

| Negative Group — Classes I and II     |      |          |      |          |                    |          |       |
|---------------------------------------|------|----------|------|----------|--------------------|----------|-------|
|                                       | Yes  | Per cent | No   | Per cent | Incomplete records | Per cent | Total |
| Pregnancies                           |      |          |      |          |                    |          |       |
| (3 or more) -----                     | 1323 | 82.3     | 116  | 7.7      | 148                | 9.8      | 1496  |
| Married -----                         | 1344 | 89.8     | 105  | 7.0      | 47                 | 3.1      | 1496  |
| Bleeding -----                        | 251  | 16.7     | 1126 | 75.2     | 119                | 7.9      | 1496  |
| Discharge -----                       | 322  | 21.5     | 1054 | 70.4     | 120                | 8.0      | 1496  |
| Suspicious Group — Classes III, IV, V |      |          |      |          |                    |          |       |
| Pregnancies                           |      |          |      |          |                    |          |       |
| (3 or more) -----                     | 55   | 85.9     | 4    | 6.2      | 5                  | 7.8      | 64    |
| Married -----                         | 60   | 93.7     | 1    | 1.5      | 3                  | 4.6      | 64    |
| Bleeding -----                        | 27   | 42.1     | 28   | 43.7     | 9                  | 14.0     | 64    |
| Discharge -----                       | 18   | 28.1     | 30   | 46.8     | 16                 | 25.0     | 64    |

trated in Table 6, more women are pregnant or receiving postpartum care in the younger age bracket, or the negative group. More women, however, are menopausal in the suspicious group, a higher age bracket. It is unfortunate that in over half these cases insufficient data for evaluation could be found in the clinical history records accompanying each specimen.

Table 6

SEXUAL STATUS OF NEGATIVE AND  
SUSPICIOUS GROUPS

| Sexual Status   | Negative group | Per cent | Suspicious group | Per cent |
|-----------------|----------------|----------|------------------|----------|
| Pregnant -----  | 345            | 23.0     | 8                | 12.5     |
| Post-Partum --- | 68             | 4.5      | 0                | 0.0      |
| Menopause ----  | 299            | 19.9     | 18               | 28.1     |
| Unrecorded ---- | 784            | 52.4     | 38               | 59.3     |
| Total -----     | 1496           |          | 64               |          |

Biopsies were performed on 54 or 4.8 per cent of the 1127 women receiving cytology examinations. A report on the biopsy was not available in nine of these. There were 16 reports of chronic cervicitis. A negative report for carcinoma was received on eight cases. Carcinoma was found in 21 of the biopsies or 1.86 per cent of the population in this study. This indicates carcinoma of the cervix occurs at a rate of 18.6 per 1000 in Indian women of the Midwest examined by this clinic. The rate could conceivably be even higher had the nine unavailable biopsy reports been on hand for study.

### Discussion

Realizing that this study is not free of biased factors, the found incidence rate of 18.6 cases of carcinoma of the cervix per 1000 population remains a striking figure. This rate is far higher than any conceived at the beginning of this study. It is several times larger than the rates published in other studies of this type. Salsbury and co-workers<sup>4</sup> found an incidence of 3.9 per 1000 in 256 cases studied by Papanicolaou smears in the Navajo. Bivens, et al<sup>5</sup> reports a comparable rate of 3.24 per 1000 from a study of 17,617 hospital charts in the same group of people. From 1171 cytology smears in the same study only two cases of carcinoma were found. These rates are far lower than those found at this clinic.

Had this study been conducted on the general Indian population, all results would have been significantly diluted. This is due to the high percentage of patients having specific gynecologic complaints. Because of this, and because of the fact that this study is a partial rather than a complete one, nothing is predicated here on the Indian population in this region as a whole. These statistics merely indicate the trends in this clinic population.

This is a study of 63 per cent of the total cervical smears made on this population. If no cases of carcinoma were found in the one third of cases not yet studied, then the incidence rate would only be reduced to



about 12 per 1000, still a high figure. However, because of known carcinoma cases in this yet uncounted portion, there is reason to believe that a complete study would yield an incidence rate which would not differ significantly from that in this study.

The very nature of the people studied makes this a study not entirely free of bias when considering the Indian population at large. Of prime importance in this regard is the reluctance of the Indian to receive periodic routine examinations. Since 67 per cent of the population in this study present a complaint related to gynecologic function, the totals found are necessarily amplified. The education level, adherence to tribal tradition, widespread settling of reservations, poor communication, inborn self-reliance, and relative lack of concern toward matters of health in these people make an unbiased study a near impossibility. Incomplete record keeping and the lack of follow-up material also limit the use of these statistics in comparative studies.

More studies of this type with a minimum of invalidating factors must be done before the incidence of carcinoma of the cervix in the northwestern Indian can be established. Perhaps an organized program to obtain cytologic smears on the population at large, or a greater effort to obtain smears on all women receiving medical care at reservation clinics and hospitals would provide material for this type of study. It would be interesting indeed, if the statistics in this paper were to hold true for the northwest Indian population. Why is there a difference in incidence between the northwestern and southwestern Indian population? Is there

really an incidence difference? In this clinic there certainly is. Only further study will provide more needed answers.

### Summary

This is a study of the incidence of carcinoma of the cervix in 1127 northwestern Indian women by examination of 1596 cytology smears. Correlation is made between pregnancies, marital status, vaginal bleeding and discharge, sexual status, age, and the incidence of carcinoma. Cervical cancer tends to occur in older age groups, in married women with several children, and at a rate of 18.6 per 1,000. There were 21 cases of carcinoma, all proven by biopsy. The study is not of a random sample, since 66.9 per cent of the cases were examined for a gynecologic complaint.

The study is not a complete one, with 677 or one third of the total yet to be studied. Because it is incomplete, and because a random population sample is not used, none of these results can be predicated of the northwestern Indian population. However, a carcinoma incidence much higher than those published in other Indian studies does exist in this clinic population.

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"The words Christian Healing are taken to mean any form of healing, whether medical, social, mental or spiritual, that will help restore health to the patient . . ." (Cowles, Edward S., MD: *Religion and Medicine in the Church*, page 8, The Macmillan Company, New York, 1925).

# Practical Aspects of Blood Coagulation

**T**HE theory of blood coagulation originally described by Morawitz in 1904 has been so greatly altered in the past 20 years as to be scarcely recognizable. Not only newly found or hypothetical factors have complicated the picture, but also the conflicts in terminology have created many difficulties to clear understanding.

The coagulation factors not only increased, but their synonyms have made orientation most difficult. The question of terminology has been partially resolved by acceptance of Roman numbers with their respective synonyms in parenthesis, and some order has resulted in the terminology of blood coagulation, but still several authors keep the original names given the factors. Even if

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many of the factors are not known, chemical entities, the several hemorrhagic disorders, and their special treatment prove that there are different factors which have to be considered.

## Factors in Blood Coagulation and Their Deficiencies

The following table gives the factors with their synonyms (the most commonly used names in blackface type):

| FACTORS     |                                                                                                                                                                                                                                                                                        | DEFICIENCIES         |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Factor I—   | <b>Fibrinogen</b>                                                                                                                                                                                                                                                                      | Fibrinogenopenia     |
| Factor II—  | <b>Prothrombin</b><br>Thrombogen<br>Serozyme<br>Plasmozyme                                                                                                                                                                                                                             | Hypoprothrombinemia  |
| Factor III— | <b>Thromboplastin</b><br>Thrombokinas<br>Cytozyme                                                                                                                                                                                                                                      | Thromboplastinopenia |
| Factor IV—  | Calcium                                                                                                                                                                                                                                                                                |                      |
| Factor V—   | <b>Proaccelerin</b><br><b>Labile Factor</b><br>Prothrombin accelerator<br>Plasma Ac globulin<br>Thrombogen<br>Prothrombinokinase<br>Prothrombinase<br>Co-Factor of Thromboplastin<br>Complement A of Prothrombin<br>PPCF—Plasma Prothrombin Conversion Factors                         | Parahemophilia       |
| Factor VI—  | Accelerin<br>Serum Ac globulin                                                                                                                                                                                                                                                         |                      |
| Factor VII— | <b>Proconvertin</b><br>Serum Prothrombin Conversion Accelerator (SPCA)<br>Stable Factor<br>Co-Thromboplastin<br>Autoprothrombin I<br>Serum Accelerator<br>Co-Factor V<br>Serozyme<br>Kappa Factor<br>Prothrombinogen<br>Prothrombin Conversion Factor<br>Prothrombin Converting Factor |                      |

|              |                                                                                                                                                                                                                                                                                                                                                                             |               |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Factor VIII— | Antihemophilic Globulin (AHG)<br>Antihemophilic Factor (AHF)<br>Antihemophilic Globulin A (AHGÁ)<br>Thromboplastinogen<br>Platelet Co-Factor I<br>Plasma Thromboplastic Factor A<br>Plasma Thromboplastic Factor (PTF)<br>Thromboplastic Plasma Component (TPC)<br>Facteur Antihemophilique A<br>Prothrombinkinase<br>Platelet Co-Factor<br>Plasmakinin<br>Thrombokatalysin | Hemophilia A  |
| Factor IX—   | Plasma Thromboplastic Component (PTC)<br>Christmas Factor<br>Plasma Factor X<br>Autoprothrombin II<br>Platelet Co-Factor II<br>Antihemophilic Globulin B<br>Plasma Thromboplastic Factor B                                                                                                                                                                                  | Hemophilia B  |
| Factor X—    | Stuart Factor                                                                                                                                                                                                                                                                                                                                                               | Stuart defect |
| Factor XI—   | Plasma Thromboplastin Antecedent (PTA)                                                                                                                                                                                                                                                                                                                                      | Hemophilia C  |
| Factor XII   | Hageman Factor                                                                                                                                                                                                                                                                                                                                                              | Hageman trait |

### The Clotting Mechanism

According to the theory of Morawitz, blood coagulation occurs in two stages as shown in Figure 1, where thromboplastin (thrombokinase) in the presence of calcium acts on the prothrombin, transforms it to thrombin (this would be the first phase of the coagulation); then the thrombin acts on fibrinogen and converts it to fibrin (this would be the second phase of coagulation). Thromboplastin was accepted as a preformed substance already present in the blood.

The right side of Figure 1 represents the modern concept of coagulation. In the last 20-30 years, in connection with the different hemorrhagic disorders, new factors have been introduced, mostly concerned with the first phase, (Thromboplastin generation), so if we look at Figure 1 where the two theories are compared, we see that the first phase of the modern theory of coagulation is completely missing from the classic theory, but also we can see that the second and third phases are nearly the same except for two new factors introduced, Factor V and Factor VII, which are prothrombin conversion accelerators, without which the prothrombin conversion to thrombin would be very slow and impractical.

According to this new theory, blood coagu-

lation is believed to occur in three main stages:

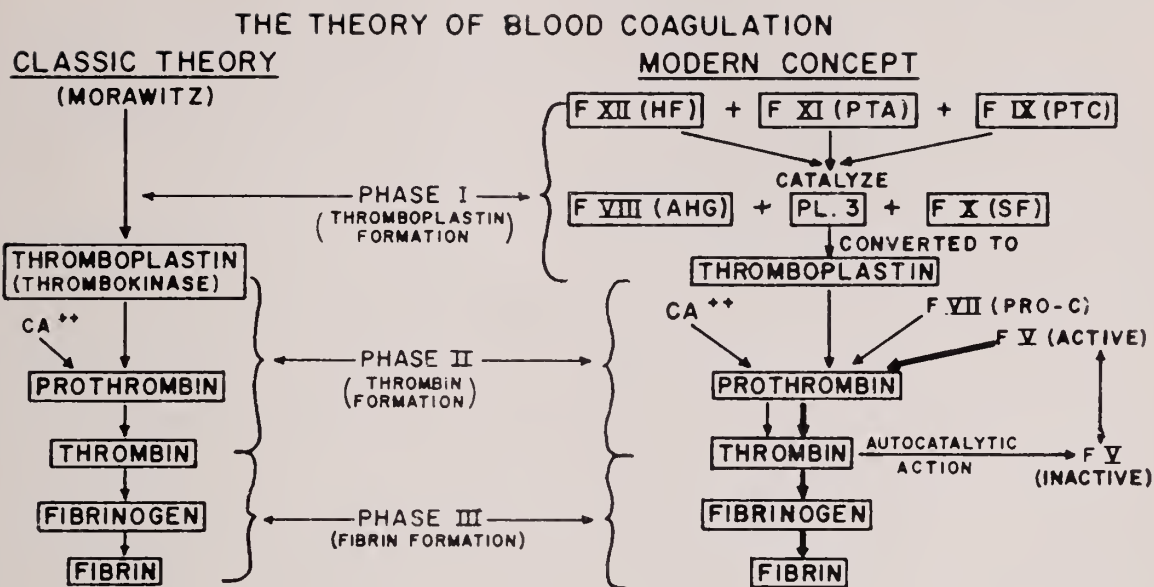
1. Thromboplastin generation.
2. Prothrombin conversion to thrombin by thromboplastin.
3. Fibrinogen conversion to fibrin by thrombin.

During the investigation in vitro, it was found that if blood is collected in silicone tubes, coagulation does not occur or is strongly delayed. They found that for coagulation in vitro, a factor is necessary, which is activated by the glass, without which coagulation does not take place or is delayed. They called it glass factor, and the stage, the *glass activation stage (first stage)*, for which the Factor XII (Hageman Factor) is responsible and to a lesser extent, Factor XI (Plasma Thromboplastin Antecedent). If we consider *clot retraction* as a separate stage, and that of *fibrinolysis*, when the blood clot is dissolved, then on the whole we speak of six stages of coagulation.

As we look (Figure 1) at the modern concept, the activated Factor XII (Hageman Factor), Factor XI (plasma thromboplastin antecedent), Factor IX (plasma thromboplastin complement), act as catalyzators on Factor VIII (anti-hemophilic



Figure 1



## LEGEND:

- F XII = HAGEMAN FACTOR
- F XI = PLASMA THROMBOPLASTIN ANTECEDENT
- F X = STUART FACTOR
- F IX = PLASMA THROMBOPLASTIN COMPONENT
- F VIII = ANTIHEMOPHILIC GLOBULIN
- PL. 3 = PLATELET FACTOR 3
- F VII = PROCONVERTIN (SERUM ACCELERATOR)
- F V = PROACCELERIN (PLASMA ACCELERATOR)

globulin), Platelet Factor 3 and Factor X (Stuart Factor), converting them to thromboplastin. These factors, in the presence of calcium and Factor VII (pro-convertin) act on prothrombin and convert a small amount to thrombin. As soon as this is formed, something seems to be happening; it lyses the platelets, which catalyze autocatalytically the inactive Factor V to active Factor V, which, with the interaction of Factor VII and calcium, accelerates, explosion-like, the prothrombin to form sufficient thrombin (see thick line). This is the same process which we can see in the laboratory. At first the blood remains liquid, then after a time it suddenly becomes solid due to the sudden formation of thrombin.

In the following stage, the thrombin converts the fibrinogen to fibrin, (Phase 3).

After this process comes the *clot retraction* and the last phase, the *fibrinolysis*, when the clot will be dissolved.

The clot retraction, which normally oc-

curs in about two or three hours after coagulation, depends on the presence of platelets. In platelet deficiency (thrombopenia or thrombasthenia), clot retraction may be absent or poor. The process of the clot retraction is inhibited by several factors. If the volume of red packed cells is too great, good clot retraction may not follow. If there is a decrease or deficiency in fibrinogen, a solid clot may not form; also in prothrombin deficiency poor clot may result.

In the last stage, the clot is dissolved by the enzymatic process of the fibrinolysin, which generally happens in two or three days. Human blood contains inactive enzyme, plasminogen or profibrinolysin, which, when activated, becomes plasmin (fibrinolysin), which digests mostly the fibrinogen or the fibrin, but also the Factor V, Factor VIII, and prothrombin.

The activation of the plasminogen (profibrinolysin) is done by strepto-, staphylo-, or tissue-kinases, which transform the plas-

minogen to plasmin. It may be enhanced by trypsin, chloroform, alcohol, nicotinic acid, by anxiety, adrenalin, advanced liver disease, malignancies, metastatic carcinoma of the prostate, severe operations, sudden death; it is further increased during shock, menses, cardiac decompensation, pneumonia, toxicosis in pregnancy, hepatic cirrhosis, porto-caval shunt, hepatitis, after narcosis, X-ray radiation, subcutaneous infusions, at climatic changes, etc.

Knowing that excess of fibrinolysin produces severe hemorrhagic disorder, this possibility must be considered.

With this presentation of the coagulation theory, the diagnostic procedures and also our therapeutic measures with hemorrhagic disorders become more orderly and meaningful.

### Hemorrhagic Disorders in Factor Deficiencies and Their Correlation to Laboratory Tests

In the following there are four tables presenting the factor deficiencies in connection with different hemorrhagic diseases.

Table 1 shows the coagulation time, prothrombin time, prothrombin consumption time, and thromboplastin generation test in connection with disease.

Tables 2 and 4 present the factors of the Phase I (thromboplastin generation) in relation to the coagulation time and the prothrombin consumption time respectively. If these factors, e.g. Factors VIII, IX, X, XI, XII, are absent or deficient, or if there is deficiency in fibrinogen, prothrombin, and vitamin K, or if anticoagulants are in excess, the *coagulation time* is prolonged, the *prothrombin consumption time* and *thromboplastin generation test* will be abnormal. On the other hand, the *prothrombin time* remains normal.

If the factors of the Phase II (thrombin formation) are deficient, i.e. prothrombin FV, FVII, FX, or strong antithrombin activity or excess circulating anticoagulants are present, or fibrinopenia, the plasma prothrombin time is prolonged. (Table 3).

With this understanding, we are able to

Table 1  
DEFICIENCIES

| TEST                              | F VIII (AHG)<br>Hemoph. A | F IX (PTC)<br>Hemoph. B | F X (SF)           | F XI (PTA)<br>Hemoph. C | F V (Labile)<br>Parahemoph. | F VII (SFCA)<br>Hemophiloid<br>State B | Thrombocytopenia | Thrombasthenia |
|-----------------------------------|---------------------------|-------------------------|--------------------|-------------------------|-----------------------------|----------------------------------------|------------------|----------------|
| Coagulation Time-----             | Prolonged or normal       | Prolonged or normal     | Slightly prolonged | Prolonged               | Prolonged or normal         | Prolonged or normal                    | Normal           | Normal         |
| Prothrombin Time-----             | Normal                    | Normal                  | Prolonged          | Normal                  | Prolonged                   | Prolonged                              | Normal           | Normal         |
| Prothrombin Consumption Time----- | Abnormal                  | Abnormal                | Abnormal           | Abnormal                | Abnormal                    | Normal                                 | Normal           | Normal         |
| Thromboplastin Generation-----    | Abnormal                  | Abnormal                | Abnormal           | Abnormal                | Normal                      | Normal                                 | Normal           | Abnormal       |

Table 2

## PROLONGED COAGULATION TIME

It is found in all deficiencies and diseases, if the deficiency is severe, of factors necessary for the first phase, for Thromboplastin generation.

1. F VIII (AHG) deficiency (Hemophilia A)
2. F IX (PTC) deficiency (Hemophilia B)
3. F XI (PTA) deficiency (Hemophilia C)
4. F XII (HF) deficiency (Hageman trait)
5. F XI (SF) deficiency
6. F V (Pro-accelerin) deficiency (Parahemophilia)
7. Fibrinogen deficiency (Fibrinopenia)
8. Prothrombin deficiency (Hypoprothrombinemia)
9. Anticoagulants
10. Vitamin K deficiency, liver damage.

Table 3

## PROLONGED PLASMA PROTHROMBIN TIME

1. Prothrombin deficiency liver disease
2. FV (pre-accelerin) deficiency
3. FVII (pro-convertin) deficiency
4. FX (SF) deficiency
5. Strong antithrombin activity and excess circulating anticoagulants
6. Fibrinogenopenia

Result: Slow conversion of prothrombin to thrombin, slow clot formation. (In deficiencies of Phase II).

Table 4

## PROTHROMBIN CONSUMPTION DEFICIENCY

(Decreased serum prothrombin time)

1. F VII (AHG)
2. F IX (PTC)
3. F XI (PTA)
4. F XII (HF)
5. F X (SF)
6. F V (pro-accelerin)
7. Thrombopenia or thrombocytopathia
8. Excess of heparin or other anticoagulants against thromboplastin

All these factors are participating in thromboplastin formation, generation. (Phase I).

If the thromboplastinogenesis is defective, a small amount of Prothrombin is used up and a great amount remains in the serum. The serum prothrombin time remains normal.

differentiate between deficiencies of factors of the two main stages, whether the abnormality is in the first phase, when we can find abnormal prothrombin consumption, thromboplastin generation and coagulation time; or in the second, when the prothrombin time

is prolonged. Differentiation among the factors is determined by assay.

## Laboratory Tests and Their Clinical Importance

There are four laboratory tests which are important in connection with the hemorrhagic disorders.

1. *Plasma prothrombin time*, which we use mostly in connection with anticoagulant therapy and also in the differentiation of the factors.

2. *Prothrombin consumption time* measures the prothrombin remaining in the serum after coagulation since nearly all prothrombin is used up during normal coagulation. If, however, there is a deficiency in the prothrombin or among the factors in the first phase (thromboplastin formation) or if there is an excess of heparin, not all the prothrombin will be consumed and a large amount will remain in the serum and the serum prothrombin time will be normal or decreased.

3. *Thromboplastin generation test (TGT)* is necessary to the differentiation of Hemophilia A and B with a mixture of normal absorbed plasma, normal serum and platelets in the presence of calcium.

The prothrombin consumption time shows there is a defect. The thromboplastin generation test (TGT) tells where the defect is. The description of these tests would be beyond the purpose of this paper.

4. *The fibrinolysis test* is very simple and important mostly to the surgeon in bleeding with thoracic, pancreatic, prostatic carcinoma or major surgery, which activates the fibrinolysin. If the wound starts to bleed or if there is internal bleeding, the surgeon may reopen the abdomen. It is well then to check the coagulation time immediately. If there is no clotting, it may be either due to excess of fibrinolysin or fibrinopenia. If there is no clot at all, then there is trouble with the fibrinogen. If clot was formed, but in a short time it dissolves (30-60 minutes), then increased fibrinolysis is present. The test is so simple that it should be done with all patients after major surgery if bleeding occurs.



## The Treatment of Hemorrhagic Disorders

What are the practical aspects after having learned the new theory? Does it alter our treatment? Is it not simpler to give blood in every case which contains all the factors?

With the detection of new factors, it becomes clear that they all have different physical or chemical characteristics which determine their roles in diagnosis and therapy. The behavior of the factors toward heat and storage and their presence correspondingly in fresh plasma and serum, barium absorbed plasma and serum, as well as in stored blood (blood bank) became the "punctum saliens" in the examination for deficiencies and in all decisions of treatment.

### FACTORS AND THEIR RELATION TO PLASMA, SERUM, ABSORBED PLASMA AND ABSORBED SERUM

|            |                                               |
|------------|-----------------------------------------------|
| F XII (HF) | { They are present in all four ingredients.   |
| F XI (PTA) |                                               |
| F VII      | { Can be found in plasma and serum.           |
| F IX       |                                               |
| F X        |                                               |
| Fibrinogen | { Are available in fresh and absorbed plasma. |
| F V        |                                               |
| F VIII     |                                               |

Prothrombin is the one which is present only in fresh plasma.

The above table gives general information about the presence of factors in the different ingredients of blood.

From our knowledge of the characteristics of the factors, of their half-life value and absorbability, their stability to heat and storage, etc., we can decide how to proceed with the treatment of given deficiencies.

### Conclusion

This paper tries to present the coagulation process with regard to the new factors

and their relation to different hemorrhagic disorders. How unsettled and still under disagreement is the whole coagulation theory, whether it concerns the origin of the factors or their role and participation in the process, is best explained by the statement of Macfarlane: "There is no definite knowledge of any of the many factors which are supposed to be involved, nor of the nature of the reaction which are supposed to undergo. It might be that the blood of these patients, though failing to react to glass, reacts normally to physiologic trauma. If this is so, the large part of what has been written, thought and taught about blood coagulation is based on the most extensively studied artifacts in the history of biology."

### ACKNOWLEDGMENT

I should like to express my appreciation and thanks to Dr. Thomas McGavack, Chief of the Research Laboratory and Assistant Chief of Staff, Veterans Administration Center, Martinsburg, W. Va., for his assistance in the preparation of this article.

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"Destructive fires took a toll of 11,800 lives and close to \$1.8 billion in property last year in this country. . ." (From News About Fire by National Fire Protection Association, October 6, 1964).

# Evacuant Suppositories in Postpartum Care

## Introduction

I wish to present to you this morning some of my clinical experiences with a new bowel evacuant, Vacuetts.\* Studies of this effervescent suppository have been reported by physicians in the fields of internal medicine,<sup>1</sup> gastroenterology,<sup>2</sup> proctology,<sup>3</sup> pediatrics,<sup>4,5</sup> and surgery.<sup>6</sup> Because there have been no reports on the use of this product in obstetrics, I initiated such a study in the Obstetrical Department at the Lutheran Medical Center in Omaha. My comments today represent a preliminary report on the 50 patients involved in this study of Vacuetts.

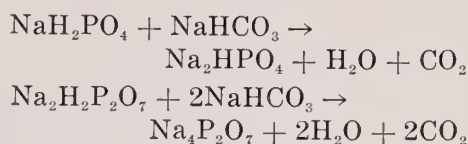
## Design of Study

It has long been my practice in the care of obstetric patients to prescribe a laxative or enema on the second day after delivery. If no complications develop, and if both labor and delivery were essentially normal, I send my patients home on the fourth postpartum day.

The purpose of this study was to determine in postpartum patients whether the new effervescent suppository was as effective a bowel evacuant as the soap-suds enema. The design of study was the substitution of a Vacuetts suppository for the enema routinely ordered. The nurse was instructed to moisten one suppository with lukewarm water before inserting it. She was cautioned against using any lubricating jelly since it inhibits the rapid release of the carbon dioxide gas from the suppository.

The active chemical ingredients are sodium biphosphate anhydrous, sodium acid pyrophosphate, and sodium bicarbonate, incorporated in a polyethylene glycol base. When the suppository moistened with tap water is inserted and comes in contact with the moisture normally present in the rectum, it disintegrates to initiate the following chemical reaction:

J. MILTON MARGOLIN, MD  
Omaha, Nebraska



Enough carbon dioxide gas is released to cause rectal distention and to stimulate defecation. The average amount of gas released is 230 cc.<sup>2</sup> Best and Taylor<sup>7</sup> have stated that "the desire to defecate is experienced whenever the pressure within the rectum is increased" and that "an increase in the volume of the contents of the rectum of from 15 to 25 cc. has been shown to be sufficient to produce an urge."

## Results

The results in the first 50 patients studied were recorded by the nurses on a standard report form. The patients were asked to rate the results themselves as to whether they felt that the bowel movement was satisfactory, not quite sufficient or unsatisfactory. Tabulation of these results showed the evacuant response to be good in 71%, fair in 21%, and poor in 8%. These results are consistent with the responses noted in other recent studies of the Vacuetts suppository.

Bowel movement occurred within 20 to 30 minutes after the suppository was inserted. No unpleasant side effects were reported by any of the patients, 86% of whom preferred the suppository to an enema.

The nurses on the obstetrical service, in comparing the suppository to an enema, uniformly rated the suppository highest in convenience, ease of administration, and economy in terms of the nurses' time involved.

## Summary

A new effervescent suppository, Vacuetts, was studied in the Obstetrical Depart-

\*Vacuetts®, a product of Dorsey Laboratories, Lincoln, Nebraska.

ment of the Lutheran Medical Center in Omaha. Fifty postpartum patients were given the suppository instead of an enema on the second day after delivery. Response was rated as good in 71%, fair in 21%, and poor in 8%. Because of convenience, ease of administration, and relative economy, this new product lends itself to standard use in the postpartum care of obstetric patients.

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"Research in the United Kingdom pharmaceutical industry, which has been increasing at 20 per cent a year in the five years beginning in 1956, has now slowed down. The main reason is the unsatisfactory state of patent law and practice, especially for regulation that allows a company to apply at any time for a compulsory license from a firm which may have spent large sums of money to develop a particular drug." (*Financial Times* of London, January 13, 1965).



# *Injury by Ionizing Radiation*

**X** RAYS and gamma rays are forms of electromagnetic energy capable of penetration through and of producing biologic changes in tissue. Since the discovery of X rays and radium, man slowly has come to respect these forms of energy. Greater and painfully attained knowledge has followed developments in atomic energy since 1940.

The biological effects of radiation exposure depend on many variables, some of which are:<sup>1</sup>

Type and energy of radiation.

Given dose, absorbed dose, integral dose.

Time-dose relation, intensity, fractionation, protraction.

Extent and sites of body exposure.

Tissue sensitivity; mitotic activity.

Environmental factors, as O<sub>2</sub> tension.

Rapidly proliferating cells with a high mitotic index are more readily damaged than others. In the human, the following cells are especially sensitive, listed here in order of their increasing resistance to radiation:<sup>1x</sup>

Gonadal chromosomes, DNA genes.

Embryonal and fetal tissues.

Lymphocytes, myelocytes, erythroblasts, megakaryocytes.

Gastrointestinal epithelium.

Epidermis.

Central nervous system.

Muscle.

Bone.

Collagen.

Adult neurones are among the less sensitive cells. Embryonal neurones are among those cells promptly damaged in acute radiation injury of fetus.<sup>1a, 2, 2a, 2b</sup>

In the adult, peripheral nerves are more resistant to radiation injury than spinal cord; spinal cord appears more resistant than cerebrum.

The common exposures of clinical neurologic concern arise from diagnostic and therapeutic radiation, nuclear energy-industries and atomic bombs.

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## ACUTE RADIATION EFFECTS

Experiments with X rays on animals suggest that high intensity radiation of acute dosage may cause rapid death from effects on medullary centers.<sup>3</sup> Doses may be adjusted sufficiently high to cause instant death.

In humans, as 1500 rad or 2000 r (acute doses, general exposure) are approached and exceeded, cerebral symptoms appear within hours, and death often within a few days. Over 5000 r exposure may be fatal within hours (even when limited to the head).<sup>2a, 4-10</sup> These appear to be primary cerebral (medullary) deaths. Neuronal damage, cerebral edema and diffuse cerebral radiovasculitis have been reported. However, secondary cerebral effects may occur from shock, intense gastrointestinal damage (fluid and electrolyte loss) and blood cellular derangement should the individual survive sufficiently long to allow these to appear.

Acute, general (whole body) exposure to X rays or gamma rays produces the following effects in humans.<sup>4-10, 11, 12</sup>

Below 200 r: Asymptomatic or minimal gastrointestinal and marrow derangements; transient.

200 r: 2 per cent seriously ill.

Over 200 r: more critical nausea and vomiting, leukopenia. Often transient.

200-500 r: At 400 r exposure, all persons critically ill.

Gastrointestinal symptoms at first. Leukopenia, thrombopenia and anemia effect great susceptibility to infections, hemorrhages in 2-6th week. Approximately 50 per cent mortality. Those who die do so within 2 months.

Over 500 r: Gastrointestinal symptoms outstanding. Diarrhea, vomiting, fever, electrolyte changes. Many die within 2 weeks.

Over 600 r: Usually fatal. Gastrointestinal syndromes of increasing severity.

Over 1500 r: Cerebral symptoms often noted. Severe gastrointestinal sloughing. Shock, erythema prominent. Fatal within a week.

2000 r and over: Cerebral symptoms predominate (convulsions, tremors, ataxia, stupor, delirium). Often die within few days.

Shock, oliguria and renal failure are not uncommon among those seriously affected.

Neuropathologic study of atomic bomb victims (Japan, dying within 70 days) demonstrates a spectrum from primary and direct radiation damage of brain to secondary cerebral lesions associated with severe anemia, hemorrhages, septicemia, inanition and liver damage. Mental and neurologic changes were common in patients coming to post-mortem study. The following microscopic cerebral lesions were often discerned:<sup>13, 14</sup>

Perivascular hemorrhages.

Transudation.

Ischemic foci.

Regressive neuronal changes especially in globus pallidus, substantia nigra and motor nuclei of cranial nerves.

Narrow beams of ionizing radiation (high energy protons, 185 MeV) may be used in a cross-fire pattern to produce focal cerebral lesions.<sup>13a</sup>

## CHRONIC RADIATION EFFECTS ON BRAIN<sup>14-30</sup>

This form of radiation exposure is more focal, direct, and commonly the result of radiation therapy to or near the brain. It may be demonstrated in treatment of brain tumors, carcinomas of head, and scalp diseases. Great skill is necessary with these patients to attain greatest therapeutic effect with no (or least) damage to healthy tissue.<sup>15</sup> There are risks of accidental overdose, of "spill" around the lesion<sup>16, 16a, 16b</sup> and an unpredictable factor of individual susceptibility.

The clinical syndrome is that of:

1. Radiation treatment to head, scalp or brain.
2. A latent period (usually many months).
3. Then a focal cerebral syndrome in the area of radiation.

Precise upper limits of tolerance of central nervous system are not known. Doses to brainstem of 4500 r administered in 4-6 weeks have been considered unsafe. To other parts of the brain, small fields (70 cm<sup>2</sup>) will tolerate tissue doses up to 4500 r in 17 days. Twenty-five per cent of patients given tissue

doses over 4500 r in small fields in 17 days will eventually exhibit cerebral damage. A larger field (up to 400 cm<sup>2</sup>) will tolerate 3500 r tissue doses in 17 days.<sup>1a, 17</sup>

Other recommendations are noted, not invariably in close agreement. The lack of close agreement is due to the many variables, including differing overall times and field sizes. One recent study suggests:<sup>17a</sup>

If large increments are necessary in 2 or 3 doses, 2 increments each of 1000 rads are best avoided on brainstem.

Three increments of 875 rads appear safely tolerated by cervical spinal cord.

If 12 to 20 increments are given over periods up to 28 days, any part of central nervous system (including 1/3 of a cerebral hemisphere) tolerates 4000 rads in 12 increments or 5000 rads in 20 increments.

The brainstem will tolerate 6000 rads over 42 days.

Other reports propose that any dose over 4000 r (over a 30 day period) to brainstem may be risky.<sup>17b</sup>

These figures cannot be considered absolute, however, and unpredictably sensitive patients may be encountered.

Following administration, a latent period ensues varying between 2 months and 7 years, commonly 2-3 years.

There appears then a focal cerebral syndrome corresponding to the site treated. It may be transient with recovery or sequelae, or may lead to death. Common are several of the following:<sup>16a, 16b, 20-22, 24-28</sup>

Headaches.

Nausea, vomiting.

Focal cerebral deficits.

Ataxia.

Convulsions (often focal).

Syncope.

Papilledema.

Dementia.

Visual tract deficits.

Diplopia.

Certain parts of the brain are more sensitive to radiation than others:<sup>17, 29</sup>

Brainstem.

White matter of deep portions of centrum semi-ovale and internal capsule.

Hypothalamus.

Neuropathologic changes apparently depend on a number of variables as yet not clearly discerned. In some groups re-

ported, vascular damage appeared prominent;<sup>16a, 16b, 18, 21, 26</sup> in others, demyelination;<sup>19, 20, 24, 27-30</sup> in some, gliotic and amyloid scarring;<sup>22</sup> in some, primary neuronal damage.

*Early* and *late* delayed reactions have been described. According to one study, these features appear:<sup>30a</sup>

**Early delayed reaction**

Occurs within few months.

Often transient.

Punched out plaques of demyelination.

Pronounced microglial and astrocytic proliferation.

Perivascular lymphocytes, plasma cells.

**Late delayed reaction**

Occurs several years later.

Little cortical involvement.

White matter severely involved.

Cystic and gliotic changes.

Vascular lesions.

Hyalinization.

Fibrosis.

Mineralization.

Others describe *acute* and *chronic* findings thus:<sup>30b</sup>

**Acute**

Inflammatory response.

Vasculitis, meningitis, choroid plexitis.

Regressive changes in granule cells of cerebellum.

Younger patients more susceptible.

**Chronic**

Neuronal and white matter damage outstanding.

Brainstem and hypothalamus especially sensitive.

Degenerative changes in blood vessels.

Histopathologic effects also depend on the volume of tissue radiated. When this is relatively large, circulatory changes appear primary; when small (as 1-2 mm diameter), cellular elements appear mostly affected. Vascular endothelium and associated astrocytes are considered the most radiovulnerable component of the mature central nervous system. The predilection of paraventricular and supraoptic nuclei to delayed radionecrosis is considered related to their rich capillary beds.<sup>30c</sup>

## CHRONIC RADIATION EFFECTS ON SPINAL CORD<sup>31-40</sup>

Radiation therapy striking the spinal cord may produce damage. This may appear in

therapy of nasopharyngeal, laryngeal or neck lesions particularly. It has been reported in radiation of retroperitoneal sites, glomus tumors, and lung-carcinomas. The occasional individual with unpredictable sensitivity to radiation appears here, too. Short lengths of spinal cord may tolerate up to 2000 r in 1 day or 5000 r in 17 days; longer lengths of cord may withstand up to 3500 r in 17 days.<sup>31-35</sup> Some radiotherapists advise not exceeding 4500 r in 30 days.<sup>35a</sup>

Symptoms appear a few months to 6 years after radiation therapy, commonly 12 to 30 months after. They may be subjective, transient, or with sequelae. In high cervical or brainstem lesions, death may occur from respiratory involvement.

The clinical picture is that of a segmental spinal cord lesion, in the zone of radiation, commonly with progressive deficit. Myelography may be necessary to rule out a neoplastic mass. Spinal fluid studies commonly disclose no changes or a slight increase in protein at most.<sup>33, 34, 36-40</sup>

The rare patient with *subacute combined degeneration* of pernicious anemia must not be overlooked. His symptoms might be loosely ascribed to radiation therapy.

Neuropathologic studies commonly describe thickened, fibrotic arterioles and vasculitis with subsequent myelomalacia.<sup>37, 39, 40</sup> Cortisone therapy appeared strikingly beneficial in some patients.<sup>36</sup>

Extensive degenerative and chronic inflammatory changes were noted in pelvic ganglia of a patient treated for cervical carcinoma with 5000 r (betatron) over 5 weeks (post-mortem examination 3 months after completion of therapy.)<sup>41</sup> No clinical concomitants were described.

Brachial plexus paralysis has been described as another uncommon complication arising from deep radiation to clavicular and axillary regions. Indurated scar tissue causes symptoms 15 months to 11 years later.<sup>41a</sup>

## THORIUM DIOXIDE<sup>42</sup>

Thorium dioxide ("Thorotrast") was a popular radio-opaque medium employed in 1930-1940's. It contains radio-active thori-



um, a potent alpha emitter with a half life of  $1.4 \times 10^{10}$  years. The alpha particles do not penetrate deeply as do X rays and gamma rays but their local radiation effect is significant. Unfortunately, too, this compound is eliminated most slowly from tissues.

It is not surprising then to note reports of tumors, scarrings, and occasionally even neoplasm attributed to residual collections of thorium dioxide in the body. A latent period of many years (even 24 years) is noted. Myelopathy, arachnoiditis, and even a meningioma have been documented.

### FETAL ANOMALIES<sup>2, 43</sup>

Embryonal neurones are among the most radiosensitive human tissues. The younger the embryo, the greater is the risk. Radiation of any kind appears best avoided before four months gestation. Even diagnostic X ray of abdomen any time during pregnancy should be restricted to emergency requirements. Chief clinical sequelae attributable to radiation of fetus include:

Microcephaly.

Hydrocephaly.

Mental retardation.

Cardiovascular, genitourinary, and osseous malformations.

Histopathologic study reveals outstanding neuronal damage.

### LATE EFFECTS<sup>44</sup>

It is known that the symptoms of radiation damage may not appear until after a considerable latent period. In the case of small but significant doses, effects may not develop until decades have passed. This is one of the problems with which biophysicists and medical science are now challenged: *How much low intensity radiation can the human organism safely tolerate?*

The following chronic, latent effects are known:

1. Genetic mutations.
2. Impaired fertility.
3. Leukemia.
4. Carcinogenesis.
5. Cataracts.
6. Premature aging?

Pituitary sarcoma has rarely appeared following large tissue doses to pituitary gland.<sup>44a</sup>

A recent report of I<sup>131</sup> treatment of hyperthyroidism in 73 children and adolescents disclosed none of these developments in several years follow-up. However, several years may not be sufficient "latent period" for discerning long-term possibilities.

### OTHER MANIFESTATIONS OF RADIOSENSITIVITY

The above reports have concerned gross clinical and present day histopathologic observations. Bio-electric, biochemical and psychologic investigations disclose neural responsiveness to smaller amounts of radiation than are required to produce traditional clinical or histopathologic changes.<sup>45</sup> We are only on the threshold of understanding effects of this type of energy on the nervous system.

Some Russian investigators have claimed that the adult central nervous system is most highly sensitive to radiation and that even a few roentgens might cause significant alteration.<sup>46-48</sup> Even patients treated with X ray distant from the brain are said to demonstrate EEG changes. Confirmation of these impressions is awaited.

Many investigators today note that a few to several hundred r to the head may cause reversible or irreversible bioelectric, biochemical, and psychologic phenomena.<sup>49</sup> EEG changes are often demonstrable within a few hours from implanted stereotactic electrodes in the hippocampus.<sup>50, 51</sup> Synaptic impulse conduction through the spinal cord is impaired by low doses of radiation to spinal cord.<sup>52</sup>

Psychologic testing covers learning and performance as well as conditioned and unconditioned reflex tests.<sup>51, 53</sup> Cortical functions appear less affected than do those of hypothalamus, limbic system and brainstem. Longstanding euphoria and psychic stimulation were reported in one group of individuals (human) given 150 r to hypothalamus. Animal experiments reveal improvement in learning, increased behavioral alertness, decreased distractibility and slower response rate following small doses of radiation to head.

(References available from author).

# Remarks of The President

I was a member of the House of Delegates and the Board of Trustees for some years before I was elected President-Elect, and I participated in all of the discussions regarding the campaign against medicare. Like the other Trustees, I voted enthusiastically for every penny that was expended and for every activity that was undertaken in the effort to defeat the medicare proposals, from the Forand bill in 1957 to its most recent versions. I believed then, and I believe today, that these proposals — now embodied in Public Law 89-97, parts A and B — are not in the best interest of the United States. I was, and I am convinced, that the quality of the care to be delivered to 18 million Americans over 65 is in serious danger because of the probable impact of this new law on physicians, hospitals, nursing homes, and other institutional and individual vendors of health care. I feel, however, just as strongly that the only statesman-like and rational behavior of our Association today, after the enactment of this law which we so strongly opposed, is to try — in the most effective way possible — to bring about regulations and other implementing actions that will mitigate the baneful effects that we know are likely to occur.

I am keenly aware of the mouse-trapping possibilities in any effort to advise the federal government with respect to regulations.

I am certain that this law included sections placing primary responsibility on the physician for certification and recertification, and service on utilization committees in an effort to place the burden of its successful implementation on the backs of the physicians.

I know that the present cordial invitation to the AMA to help write the regulations is not a sudden expression of sincere, warm, and cordial feelings toward us. The President and the Department of Health, Education, and Welfare know that this law is certain to be one of the most difficult ad-

JAMES Z. APPEL, MD

ministrative problems in history unless the doctors of the nation exert their utmost efforts to help make it work.

I have assumed that a major objective of their discussions with us is to minimize adverse public reaction when problems arise. On the other hand, we from the AMA who are meeting with representatives of government have our own special motivation, which is to take every action possible to preserve the freedom of decision-making by physicians insofar as it is possible to do so under this law, and to insure that the blame for the harmful effects of this law, which seem to me are inevitable, will not be placed upon our shoulders. It may well be, even though the objectives of the negotiating parties may be quite different, as occurs typically in labor-management negotiations, that we will agree on words that will be reasonably satisfactory to both parties. There is no doubt in my mind that HEW and AMA are approaching this problem of implementation of Public Law 89-97 from different points of view.

I am sure that the House will not wish to dictate to any individual physician what action he should take regarding the rendering of care to patients under the conditions that will pertain under Public Law 89-97. Each physician must finally decide for himself the course he will pursue — an action which the law clearly permits.

But I do want to discuss candidly some aspects of group nonparticipation. I will leave to the lawyers the technical legal questions involved. I would like to consider briefly the situation aside from the legal possibilities under the Sherman Act.

I submit that were it perfectly legal and without risk to endorse a nonparticipation motion, such action might well be unwise. All of us have been concerned for years with



the so-called image of the AMA and of individual physicians.

In our Eldercare campaign we succeeded in winning a large measure of support from the public. If the Congress had responded to its mail which poured in from Americans in all walks of life and to the editorials that appeared across the country in support of this reasonable and sound approach to the provision and financing of health care of persons over 65, we would have won. Having made the attempt and lost, we now are expected by the public, the press and the Congress to act as reasonable and mature men and women.

I think it is only reasonable for us to act this way for the good of medicine and our patients. Likewise, it is sensible for strategic reasons. Our next great legislative battle could well concern itself with government participation in the financing of the health care of 180 million people under the age of 65. Government won the battle for the health care of those over 65, but the vast majority of the nation continues to receive its care predominantly in the private sector of the economy with financing mechanisms that are free of government intervention or control. The day surely will come when our great Association again will raise its voice against extension of federal control below the age of 65. I submit that our voice will be listened to with greater respect if we act with the utmost restraint and prudence during this interim period while government is trying to digest this program for 18 million Americans over 65.

Our two present objectives should be (1) to meet the immediate situation in the most statesman-like manner possible, winning the respect of the public and the press for our judicious handling of the issues that confront us today, and (2) to prepare for the next infinitely more crucial battle over the means of financing the health care of the entire population.

To prevent extension of medicare we must redouble our efforts to educate the people

concerning the deleterious effects Public Law 89-97 is likely to have on the quality of the health care of the beneficiaries. After the law becomes effective we must document these arguments with experiences as they actually occur. Second, we must prepare amendments to the law which will mitigate its harmful effects and gradually mold it in the direction of "Eldercare." Third, we as individual physicians immediately must take a more active part in the political activities of the party of our choice, especially at the precinct and community level. We must secure positions of influence in our party so that we can develop its policies and influence the selection of candidates for office at the local, state and national levels. Donations to AMPAC and the local political party campaign fund should continue and should be increased. It takes money to elect a candidate. But this is not enough. We cannot be flying buttresses supporting the building from the outside. We must get in the building and be a part of it.

Ours is a profession which must remain unified, or we fail in our stewardship to humanity. Regardless of our individual persuasion on political matters, regardless of any resentment we might feel, either against government or our colleagues, we cannot fulfill our obligations if we permit personal feelings to disunite us or lessen our devotion to duty.

The waves of knowledge which have washed over medicine since its earliest history must continue to grow. Ours is the one field dedicated solely to the preservation of life! What a wonderful responsibility that is, but how terrible the consequences if we neglect it.

I submit then that no political crisis is as deleterious to medicine as one brought about by its members. We need unity of purpose. We need freedom of thought. We need optimism and a higher morale than we have ever needed heretofore, so that we will not be cowed into foolish and petulant action.



## Coming Meetings

### CRIPPLED CHILDREN'S CLINICS—

- November 6— Norfolk, Norfolk State Hospital
- November 20 — Alliance, Central High School Building
- December 4 — North Platte, Adams Junior High School
- December 18 — Falls City, Elks Club

### AMERICAN COLLEGE OF PHYSICIANS

— The ACP will present its Postgraduate Course No. 5: Psychiatry for the Internist, November 1-5, 1965, at the University of Colorado School of Medicine, 4200 East Ninth Avenue, Denver, Colorado. Write to Edward C. Rosenow, Jr., MD, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.

### AMERICAN COLLEGE OF CLINICAL PHARMACOLOGY AND CHEMOTHERAPY —

The ACCPC will hold its second annual meeting at the Hotel Knickerbocker in Chicago on November 3 and 4. Speakers will include Doctors Carl Schmidt, John H. Talbott, and Irvine Page. For information: Tom G. Wharton; phone Chicago 267-6900.

### CORNHUSKER CONFERENCE ON SURGERY —

Will be held on November 6, 1965, from 9 a.m. to 11:30 a.m., at the Nebraska Center for Continuing Education, in Lincoln, Nebraska. For information and reservations, write to the Department of Surgery, University of Nebraska College of Medicine, Omaha, Nebraska.

**NUTRITION SCIENTISTS** — A meeting of nutrition authorities and scientists, organized by the Council on Foods and Nutrition of the AMA, will be held in Chicago, November 8-11, at the Edgewater Beach Hotel.

### AMERICAN COLLEGE OF PHYSICIANS

— The ACP will hold its Postgraduate Course No. 6: Review of Advances in Internal Medicine, November 8-12, 1965, at

Maimonides Hospital of Brooklyn (Kronish Auditorium, 4802 Tenth Avenue, Brooklyn 19, New York), affiliated with State University of New York Downstate Medical Center College of Medicine. Direct requests for information and registration forms to Edward C. Rosenow, Jr., MD, Executive Director, the American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.

### CONTINUING EDUCATION COURSES FOR PHYSICIANS —

Sponsored by the University of Nebraska College of Medicine's Office of Continuing Education:

- November 6, 1965 — "Cornhusker Surgery Conference" (Nebraska Center, Lincoln)
- December 9-10, 1965 — "Breast Cancer for the Practitioner" (Omaha Campus)
- December 16-17, 1965 — "Clinical Laboratory Medicine" (Omaha Campus)

### 1965 POSTGRADUATE COURSES SPONSORED BY THE AMERICAN COLLEGE OF CHEST PHYSICIANS —

Clinical application of cardiopulmonary physiology: Knickerbocker Hotel, Chicago, October 18-22. Diagnosis and treatment of diseases of the heart and lungs: Barbizon Plaza Hotel, New York City, November 15-19. What's new in the diagnosis and treatment of cardiovascular and pulmonary diseases: Fountainebleau Hotel, Miami Beach, January 24-28, 1966. Clinical application of cardiopulmonary physiology: Ambassador Hotel, Los Angeles, February 14-18, 1966. Cine-angiographic techniques in cardiovascular diseases: Cleveland Clinic, Cleveland, April 11-13. Write to: American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

**THE INAUGURAL SCIENTIFIC PROGRAM** of the new Ancker Hospital (Saint Paul-Ramsey Hospital) will be held on November 11, 12, and 13, 1965. Speakers will include Dr. Martin Cummings (Director, National Library of Medicine), Ernest Lowe (Chief of Obstetrics and Gynecology, D.C. General Hospital), Victor Buhler (President, American College

of Pathology), John Haserick (Department of Dermatology, Cleveland Clinic), Robert Hollenhorst (Section of Ophthalmology, Mayo Clinic), J. A. Donaldson (Professor of Otolaryngology, University of Washington), Herman Moers h (Mayo Clinic), Edmund Flink (Professor of Medicine, University of West Virginia), Burtram Schiele (Professor of Psychiatry, University of Minnesota), F. John Lewis (Professor of Surgery, Northwestern University), and Russell Lucas Associate Professor of Pediatrics, University of West Virginia). All physicians are invited. Write to James F. Hammarsten, MD, Chief of Medicine, Ancker (Saint Paul-Ramsey) Hospital, Saint Paul, Minnesota.

#### AMERICAN COLLEGE OF PHYSICIANS

Postgraduate Course No. 7 of the ACP: Pathophysiological Basis of Therapeutics, November 15-19, 1965, University of Kentucky Medical Center, Lexington, Ky. Write to Edward C. Rosenow, Jr., MD, Executive Director, American College of Physicians, 4200 Pine St., Philadelphia, Pa. 19104.

**ELEVENTH ANNUAL MID-STATE MEDICAL CONFERENCE** — Sponsored by the Buffalo County Medical Society, will be held November 16, 1965, at the Kearney Convention Center at the Holiday Inn, Kearney, Nebraska. The Conference is approved for 8 hours credit by the American Academy of General Practice.

**AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS** — The Committee on Injuries of the American Academy of Orthopaedic Surgeons in conjunction with the University of Texas Southwestern Medical School will present a Comprehensive Postgraduate Course on the Treatment of Injuries in Dallas, Texas, at the Marriott Motor Hotel, November 17-20, 1965. For information, write to Charles F. Gregory, MD, c/o American Academy of Orthopaedic Surgeons, 29 East Madison St., Chicago, Illinois 60602.

**UTILIZATION REVIEW** — The Seventh Annual Medical Services Conference, entitled "Medical Staff in Action — 1965, Utilization Review," a one-day meeting sponsored by the AMA Council on Medical Service and its Committee on Medical Facilities, will take place in the Bellevue-Stratford Hotel, Philadelphia, on November 27, from 9 a.m. to 4:30 p.m., and will immediately precede the 19th Clinical Convention of the AMA. Write to AMA, Department of Hospitals and Medical Facilities, 535 North Dearborn, Chicago, Illinois 60610.

**ANIMAL CARE PANEL** — 16th Annual Meeting; Sheraton Hotel, Philadelphia; November 15-19, 1965. Contact Mr. Joseph J. Garvey, Executive Secretary, 4 East Clinton Street, Joliet, Illinois 60434.

**FIRST NATIONAL CONFERENCE ON AREAWIDE HEALTH FACILITIES PLANNING, AMA** — Americana Hotel, Bal Harbour, Florida, November 28-29, 1965.

American College of Physicians  
Postgraduate Courses, 1965-1966 —

The following courses are made possible by the generous cooperation of the directors and institutions involved. Tuition fees: Members, \$60; Nonmembers, \$100. Registration forms and requests for information are to be directed to: Edward C. Rosenow, Jr., MD, Executive Director, The American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.

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**PSYCHIATRY FOR THE INTERNISTS**— Nov. 1-5, University of Colorado Medical Center, Denver, Colo.; Herbert S. Gaskill, MD, FACP, Director.

**REVIEW OF ADVANCES IN INTERNAL MEDICINE** — Nov. 8-12, Maimonides Hospital of Brooklyn, Brooklyn, N.Y.; David Grob, MD, FACP, Director; Ernest Greif, MD, Co-Director.

**PATHOPHYSIOLOGICAL BASIS OF THERAPEUTICS** — Nov. 15-19, University of Kentucky, Medical Center, Lex-



ington, Ky.; E. D. Pellegrino, MD, FACP, Director.

**PSYCHIATRY FOR THE INTERNIST** — Dec. 6-10, University of Southern California, Los Angeles, Calif.; Allen J. Enelow, MD, Director.

— 1966 —

**MEDICINE OF TOMORROW: RECENT ADVANCES IN INTERNAL MEDICINE** — Jan. 10-14, University of Alabama Medical Center, Birmingham, Alabama; Howard L. Holley, MD, FACP, Director.

**SECOND NATIONAL SYMPOSIUM ON COCCIDIOIDOMYCOSIS** — December 8-9-10, 1965, Del E. Webb Towne House, Phoenix, Arizona. For further information, contact: Arizona Tuberculosis and Health Association, Inc., 733 West McDowell Road, Phoenix, Arizona 85007.

**Future Meetings of the American College of Surgeons—**

— 1966 —

**BAL HARBOUR, FLORIDA**, January 13-15. Sectional Meeting. Americana Hotel.

**HOUSTON, TEXAS**, January 31 - February 2. Sectional Meeting. Sheraton-Lincoln Hotel.

**CLEVELAND, OHIO**, March 14-17. Annual 4-Day Sectional Meeting for Doctors and Graduate Nurses. Sheraton-Cleveland and nearby hotels.

**ANNUAL CLINICAL CONGRESS**, October 10-14, 1966. San Francisco, California.

For any advance information address: Secretary, American College of Surgeons, 55 East Erie Street, Chicago, Illinois 60611.

**THE HAHNEMAN MEDICAL COLLEGE AND HOSPITAL** of Philadelphia offers the following Postgraduate Education Courses during 1965 and 1966:

—November 22-24, 1965; 15th Hahneman Symposium Cancer Chemotherapy; Dr. Isadore Brodsky; Sheraton Hotel.

—December 8-10, 1965: A Hahneman Symposium on New Concepts in Gynecological Oncology; Dr. George C. Lewis; Sheraton Hotel.

—April 20-23, 1966: 16th Hahneman Symposium, Arterial Occlusive Disease; Dr. Albert N. Brest; Marriott Motor Hotel.

—December, 1966: 17th Hahneman Symposium, Nutritional Dysfunction; Dr. Donald Berkowitz; Sheraton Hotel, Philadelphia.

**CONFERENCE ON AIR POLLUTION RESEARCH** — The AMA has scheduled the first Air Pollution Medical Research Conference for March 2-4, 1966, at the Ambassador Hotel in Los Angeles. Six additional cooperating organizations include The American College of Chest Physicians, the American Thoracic Society, the U.S. Public Health Service, the California State Department of Public Health, the California Medical Association, and the Los Angeles County Medical Association. Write to Air Pollution Medical Research Conference, Department of Environmental Health, AMA, 535 N. Dearborn St., Chicago, Illinois 60610.

**CONTINUING EDUCATION** — Closed Chest Resuscitation; University of Nebraska College of Medicine, at Eppley Research Institute, March 8, 1966 (for physicians, 9th for dentists, and 10th for nurses). Info: Continuing Education, University of Nebraska College of Medicine, 42nd and Dewey, Omaha 5.

**MICROCIRCULATION** — Microcirculation is to be the topic of discussion at the Heart Association of Southeastern Pennsylvania's Fifth National Symposium to be held at the Philadelphia's Sheraton Hotel on March 10 and 11, 1966. Write to Lyle L. Perry, Heart Association of Southeastern Pennsylvania, 318 S. 19th Street, Philadelphia, Pa. 19103.

**NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS** — "Vision for the Space Age;" Houston, Texas, Rice Hotel, March 24-26, 1966. Info: Director of Information John D. Coleman, 16 East 40th Street, New York 10016.



**SIGHT - SAVING CONFERENCE** — The 1966 annual Sight-Saving Conference of the National Society for the Prevention of Blindness, Inc., will take place from March 30 through April 1, 1966, at the Hotel Roosevelt, New York, N.Y. Write to John D. Coleman, Director of Information, National Society for the Prevention of Blindness, Inc., 16 East 40th St., N.Y.C.

**POSTGRADUATE COURSE IN LARYNGOLOGY AND BRONCHOSOPHAGOGY** — A postgraduate course in laryngology and bronchoesophagology will be conducted by the Department of Otolaryngology of the Illinois Eye and Ear Infirmary and the College of Medicine of the University of Illinois at the Medical Center, Chicago, from March 21 through April 2, 1966. Write to the Department of Otolaryngology, College of Medicine of the University of Illinois at the Medical Center, Postoffice Box 6998, Chicago, Illinois 60680.

**FIRST ANNUAL BIOMEDICAL LASER CONFERENCE** — June 17-18, Sheraton-Boston Hotel, Boston, Massachusetts.

**TENTH WORLD CONGRESS OF THE INTERNATIONAL SOCIETY FOR REHABILITATION OF THE DISABLED** — September 11-17, 1966, Rhein-Main-Hall, Wiesbaden, Germany.

**INTERNATIONAL CANCER CONGRESS** — The IX International Cancer Congress will be held in Tokyo, Japan, from October 23-29, 1966. Write to Hirsch Marks, MD, 435 East 57th St., New York 22, N.Y.



## Know Your Blue Shield Plan

Important Announcement by the AMA  
And NABSP—

The nation's Blue Shield Plans have been encouraged by the American Medical Association to play an important role in the ad-

ministration of the physician services portion of the new Medicare Law.

A statement was issued by the AMA in response to a request for guidance by the National Association of Blue Shield Plans on the part member Blue Shield Plans should take in the administration of the supplementary medical insurance program of PL 89-97, the new Medicare Law.

The statement, which was approved by the American Medical Association Board of Trustees on August 14, said:

"The Supplementary Medical Insurance Program of the Medicare Law (PL 89-97) calls for voluntary medical insurance plans, group health plans, and private insurers to enter into contracts with the government to provide specified administrative functions. It has been indicated by the Department of Health, Education, and Welfare that Blue Shield Plans will be among those carriers called upon to enter into contracts to administer the program.

"The Board of Trustees of the American Medical Association encourages Blue Shield Plans and the National Association of Blue Shield Plans to assume an important role in the administration of the medical-surgical portion of the medicare program."

In commenting on the AMA statement, John W. Castellucci, Executive Vice President of the National Association of Blue Shield Plans, observed:

"It is apparent that Blue Shield should play a role in the medical-surgical portion of the Medicare Law for three reasons: (1) Blue Shield is an important factor in medical prepayment with some 56 million members, including five million aged; (2) Blue Shield has the active participation of more than 150,000 practicing physicians; (3) It would take a strong carrier with long established relationships with both physicians and patients to administer this program.

"At the same time, Blue Shield has sought advice from the American Medical Association on the role it should play. The statement by the AMA Board of Trustees

encouraging Blue Shield to play an important role clarifies our future actions.

"Representatives of the National Association of Blue Shield Plans acted accordingly when they met with the Social Security Administration on August 18 to discuss Blue Shield's participation in the Medicare program."

## Medicare in Operation

### Determination of Eligibility for Medicare Benefits—

All eligible dependents under the Medicare Program must have Identification Cards from the age of ten years and older. Children under the age of ten qualify for Medicare benefits by using their mother's card; the exception to this: if the child lives apart from the mother or if the mother is divorced (she is thereby not entitled to an identification card). In these cases, the child must have an identification card regardless of age. To further assure the physician of the patient's eligibility, he should check to see if the patient is the dependent pictured and described on the card, that the eligibility date has not expired (if the card does not have an expiration date, it is invalid), and that card shows that the dependent is entitled to care from civilian sources.

When the patient and the sponsor are residing together, a Non-availability Statement must be presented to the physician along with the Identification Card in order to claim Medicare benefits, with the exception of a "Bona Fide Medical Emergency" or if the patient is on a trip away from the sponsor's duty station.

This Non-availability Statement assures the physician or the dentist that the specific care the patient needs is not at the present time available at the nearby Uniformed Services medical facility. This permit, however, does not assure the doctor that the required care is authorized within the scope of the Medicare program.

## DELEGATE'S REPORT

The House of Delegates of the American Medical Association was called into Special Convention on October 2nd and 3rd, 1965, at the Palmer House in Chicago, Illinois.

The reason for the call was to consider Public Law 89-97 which became the law of the land on July 30, 1965. Public Law 89-97 is also known as the Medicare Law.

This law is to provide a hospital insurance program for the aged under the Social Security Act, with a supplementary medical benefits program and an expanded program of medical assistance to increase benefits under the Old Age Survivors, and Disability Insurance System to improve the Federal-State public assistance programs and for other purposes.

Dr. James Appel, President of the AMA; and Dr. Percy Hopkins, the Chairman of the Board of Trustees, addressed the opening session and made some very pertinent remarks concerning the position of the AMA with respect to Public Law 89-97.

Dr. Appel stated that he, "as a member of the House of Delegates, the Board of Trustees, and as President-Elect of the American Medical Association, had participated in all the discussions regarding the campaign against Medicare." He stated "that he believed that the proposals embodied in Public Law 89-97, parts A and B, are not in the best interest of the United States." He stated that he was convinced "the quality of the care to be delivered to 18 million Americans over 65 is in serious danger because the probable impact of this new law on physicians, hospitals, nursing homes and other institutional and individual vendors of health care."

Dr. Appel also stated that he was certain that this law included "sections placing primary responsibility on the physician for certification and recertification, and service on utilization committees in an effort to place the burden of its successful implementation on the backs of the physicians."

Dr. Percy Hopkins, Chairman of the Board of Trustees, stated, that "on August 30th, at the invitation of the Secretary of



the Department of Health, Education and Welfare, the Advisory Committee met with Secretary Gardner and other officials of Health, Education, and Welfare." At this time HR 3140, the Administration's bill to establish regional medical complexes for research and treatment of heart disease, cancer, stroke, and other major diseases, was in the final stages of consideration by the House of Representatives Committee on Interstate and Foreign Commerce. AMA witnesses, Drs. Appel, Hussey, and Howard, had testified against the bill, and strenuous efforts had been made to present our objections to individual members of the House Committee. The companion bill in the Senate had already passed, after hasty and brief consideration by the Senate Committee on Labor and Public Welfare, without a single opposing vote. Thus on August 30, the AMA Advisory Committee was confronted by a legislative situation that seriously interfered with its effort to advise in shaping regulations under Public Law 89-97 that would be least objectionable to the profession and to the public.

Discussions with Health, Education, and Welfare Officials on August 30 regarding possible changes in HR 3140 revolved around policy questions of such magnitude that arrangements were made for a direct meeting with President Johnson later that afternoon. Following the conference with the President, and at his direction, HEW Officials agreed to review HR 3140 sentence by sentence with the Advisory Committee. Twenty amendments, many of major importance, were accepted by the group and subsequently were incorporated into the bill adopted by the House Committee on Interstate and Foreign Commerce. On September 30, the Senate adopted HR 3140 without amendment and sent the bill to the White House. The negotiations resulted in the following significant changes in HR 3140:

1. No national network of regional complexes is now established;
2. The word "co-ordinated" wherever appeared has now been replaced by the word "co-operative;"

3. The bill now applies to heart, cancer, stroke, and "related diseases" not to "other major diseases;"
4. Practicing physicians are given a significant role on local advisory committees and on the statutory advisory council to the Secretary;
5. The "demonstrations" provided in the original bill must now be related to "research and training;"
6. The emphasis in the amended bill is on the operation of pilot projects whose effectiveness will be subject to review before new projects are approved;
7. The statutory advisory council is now a body with power to veto as well as advise;
8. New construction is eliminated from the bill. The amended bill provides construction funds for alteration, repair, remodeling and renovation of existing buildings;
9. The term "diagnostic and treatment stations" is deleted entirely from the bill and replaced by the word "hospital;"
10. Only patients who have been referred by a practicing physician can receive the care provided, which now must be incident to research, training, and related demonstrations.
11. Appropriations were reduced from \$650,000,000 over a four year period to \$340,000,000 for three years.

The Advisory Committee, in its negotiations with the President and Secretary Gardner regarding HR 3140, made it clear that the AMA position on this bill was that adopted by the House of Delegates in June, 1965. The acceptance of these amendments did not change that position.

During the meetings on August 30 on Public Law 89-97, AMA participation was requested on six technical committees established by the Department of HEW which are advisory to the statutory advisory council. These technical committees and their areas of concern are:



1. Committee on Reimbursement.
  - a. Development of principles for devising reasonable cost formulas.
2. Committee on Physician Participation.
  - a. Physician role in utilization review plan.
  - b. Definitions of terms such as: "emergency hospital services" and "routine physical checkups."
  - c. Administrative policies with respect to determining reasonable charges.
3. Committee on Provider Participation.
  - a. Conditions of participation for and independent laboratories, hospitals, home health agencies,
  - b. Agreements with providers of services.
4. Committee on Administrative Agents.
  - a. Criteria for selecting fiscal intermediaries.
  - b. Criteria for selecting carriers.
  - c. Delegation of functions to administrative agents.
5. Committee on Specialists Services in Hospitals.
  - a. Methods of distinguishing between services for which payment may be made under part A and under part B.
  - b. Financial arrangements between specialists and hospitals as affected by manner of reimbursement under the Act.
6. Committee on Psychiatric Services.
  - a. Special conditions of participation for psychiatric institutions.
  - b. Special certifications needed for an in-patient in a psychiatric hospital.

On October 1, the advisory committee conducted its first informal meeting for the Representatives of Constituent Medical Associations. At this meeting presentations were made by the American Hospital Association, and by the AMA on their current activities and plans in connection with the law.

This law has four titles. Title I is concerned with health insurance for the aged and has two parts. Part I has three sub-parts: Part A establishes a hospital insurance program patterned after the King-Anderson Bill; Part B establishes a voluntary, federally administered medical insurance program to provide benefits which supplement the benefits under the King-Anderson Program; and Part C contains definitions and provisions relating to the administration of Parts A and B, and authorizes the Railroad Retirement Board to establish a hospital insurance program identical to that contained in Part 1-A for railroad retirement beneficiaries. Part 2 of title I establishes a new program which will replace the existing programs for medical assistance under the public assistance programs.

Title II amends the Maternal and Child Health and Crippled Children's Programs, extends the grant program for mental retardation planning, amends the public assistance programs to authorize federal participation in assistance to aged individuals with tuberculosis or mental disease and authorizes appropriations for a study of resources for the diagnosis and prevention of emotional illness in children.

Title III makes numerous amendments to the Old-Age and Survivors Insurance and Disability Insurance Programs under the Social Security Act, including compulsory coverage for physicians, payments for non-permanent disability, and increases in the taxable wage base and tax rate.

Title IV amends the public assistance programs to provide, among other things, increases in the federal contributions for those programs.

There were 43 resolutions presented to the House of Delegates. These resolutions covered practically every aspect of Public Law 89-97 as it pertains to all aspects of the practice of medicine.

The Reference Committee on Legislation and Public Relations held hearings on all these resolutions which lasted seven and one-half hours and heard 125 witnesses speak on twenty separate subjects.

The Physician-Patient Relationship was taken up first and since this provoked considerable discussion, I shall quote from the Committee Report as follows, "Public Law 89-97 affects the legal, traditional and ethical concepts of the physician-patient relationship. Legal counsel for the American Medical Association has stated that an individual physician acting independently and not in concert with others can lawfully refuse to accept any person as a patient who is a beneficiary under the program, or he may elect to treat such persons.

The Judicial Council on October 1, 1965 rendered the following opinion: "The Principles of Medical Ethics are applicable to physicians when they engage in group action as well as when they act individually. Section 4 calls upon physicians to observe all laws. Accordingly, medical organizations must be mindful of the possible consequences of the actions they propose, engage in or encourage."

Under ordinary circumstances, the individual physician acting independently, is ethically free to select his patients.

- a. He may decline to render medical services to persons covered by the "Health Insurance for the Aged Act."
- b. He may choose to treat such persons without charge.
- c. He may treat his patients with the advance understanding that he will look to them exclusively for payment and that he will or will not in any way help them in obtaining reimbursement for the cost of his services or the cost of associated services.

However, under some circumstances, the physician's freedom to select his patients may be circumscribed by overriding ethical consideration. For example:

1. A physician should respond to any request for his assistance in an emergency.
2. Once having undertaken a case, the physician should not neglect the patient, nor should he withdraw from the case without giving notice suffi-

cient to allow the patient to obtain another physician.

3. If a physician decides not to participate in the Medicare Program or decides to limit his participation, he should so advise the patient in advance of treatment. This applies to services rendered by the physicians as well as hospital services and other benefits provided under the program.
4. As provided in Section I of the Principles of Medical Ethics, a physician should not refuse to render medical services to any person, if as a result such person will be unable to get necessary medical care.

It should be noted also that Section 6 of the Principles provides that "a physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause the deterioration of the quality of medical care." If after regulations are promulgated and Medicare law becomes effective, the individual physician, acting independently and not in concert with others, finds it does tend to impair the free and complete exercise of his medical judgment and skill or to cause a deterioration of the quality of medical care, the individual physician would be justified under the Principle in not participating under the law.

The House of Delegates adopted a statement of policy regarding the traditional physician-patient relationship as it relates to Public Law 89-97 as follows:

"The American Medical Association opposes any program of dictation, interference, or coercion, whether direct or indirect affecting the freedom of choice of the physician to determine for himself the extent and manner of participation or financial arrangement under which he shall provide medical care to patients under Public Law 89-97."

The medical profession has a vital interest in the regulations which are promulgated under Public Law 89-97 and adopted a statement as to the present position and



policy of the American Medical Association:

- a. The American Medical Association shall continue to meet with representatives of agencies and departments of Federal Government, to participate in such advisory committees which are created, and to contribute whatever advice and suggestions are deemed advisable and necessary in the formulation and revision of regulations which will help it achieve medicine's objectives on behalf of the public and the profession.
- b. The American Medical Association urges every physician, regardless of the extent of his involvement, to render whatever advice and assistance he can, so that regulatory changes and legislative modifications may be suggested or sponsored by the American Medical Association in order that the best interest of the public and the profession may be protected in the providing of medical care.
- c. This House of Delegates expresses confidence in the Board of Trustees of the American Medical Association, its Advisory Committee, and the recently appointed three-man consultant committee on Public Law 89-97, for their continuing efforts to secure regulations which are in the best interest of good patient care.

The question of intermediaries under Public Law 89-97 was discussed and the AMA took the position that the state or appropriate local medical society, as the case may be, should express any preference for the selection of a carrier.

Difference of opinion as to the purpose of utilization review committees were expressed. It was recommended that hospital utilization review committees shall be composed of practicing physicians.

The House of Delegates recommended that the Association take appropriate action to inform physicians regarding the options of payment for services available to them under the law.

The separation of professional fees and hospital charges was discussed and it was suggested that the fee for services of the hospital-based specialist and the hospital charges should not be merged. The specialist should bill and collect his own fee.

In conclusion, let me state that this special session of the House of Delegates was most informative and necessary. After listening to all the discussions, it became evident that unity in the medical profession in these difficult and crucial times is imperative. It was evident by the action of the House of Delegates that they did not wish to dictate to any individual physician what action he should take regarding the rendering of care to patients under the conditions of Public Law 89-97. Each physician must finally decide for himself the course of action he will pursue, which the law clearly permits.

In these trying times the physicians of these United States must and will stand together and serve the best interest of their patients.

It is now evident that we are behind in the first round of this battle but many fights have been won in the last round. The need for active physician participation in political activity remains clear. Medical societies and physicians should support and assist AMPAC, and local medical political action committees in their efforts to elect candidates to office who will help preserve the physicians' right to free and independent practice of medicine.

E. F. Leininger, MD  
Delegate

## Announcements

### Eighth Annual SAMA-Eaton Art Awards—

Entries are being accepted in the national competition for the SAMA-Eaton Medical Art Awards, it has been announced by the executive director of the Student American Medical Association. The SAMA now numbers 60,000 members. Medical students, interns, residents, professional medical photographers, and students of medical illustrations are eligible for the cash awards



and plaques. Write to SAMA, 1910 Ridge Road, Homewood, Illinois 60430. Entries must be received by December 20, 1965.

#### Easter Seal Society—

The annual convention of the National Society for Crippled Children and Adults (the Easter Seal Society) will meet in Chicago at the Palmer House, November 19 through 22. Speakers will include Dr. Ethel J. Appenfels, professor at New York University School of Education, named "Teacher of the Year" by the American Women's Association and "Woman of the Year" by the National Association of Negro Women, as well as "Outstanding Woman in Anthropology" by the Federation of Jewish Women's Organizations; Dr. C. Northcote Parkinson, of "Parkinson's Law;" and Dr. Ralph Nichols, Professor of Rhetoric at the University of Minnesota.

#### Sixth Annual SAMA Scientific Forum—

The sixth SAMA-Mead Johnson Scientific Forum program of the Student American Medical Association has been announced. Original research papers by medical students, interns, and residents must be submitted by January 1, 1966. Awards consist of checks, plaques, and expense-paid trips to the annual meeting of the SAMA in Los Angeles in May, 1966. Write to SAMA headquarters, 1910 Ridge Road, Homewood, Illinois 60430.

#### Ethics and Professionalism Congress Postponed—

It has been announced by James H. Berge, MD, Chairman of the Judicial Council of the AMA, that the First National Congress on Ethics and Professionalism, to have been held on October 2-3 at the Drake in Chicago, has been postponed, and will be rescheduled. The postponement was caused by the special convention of the House of Delegates of the AMA in Chicago, on the same dates.

#### SAMA-Squibb Scientific Exhibit Awards—

The 1966 SAMA-Squibb Scientific Exhibit awards program has been announced by the president of the Student American

Medical Association. The program is made possible by a grant-in-aid from E. R. Squibb & Sons, and provides cash and travel awards for ten semi-finalists from medical student, intern, and resident applications. The deadline is January 31, 1966. Write to the executive director of SAMA, 1910 Ridge Road, Homewood, Illinois 60430.

## News and Views

#### American Association of Medical Assistants—

Omaha chapter delegates attending the annual meeting of the American Association of Medical Assistants, October 13-17, in New York, include Mrs. Roy Ekstrom, Mrs. Paul Reynolds, and Miss Toby Fellman; alternate delegates are Mr. Edward H. Swotek and Mrs. Henry V. Mehrtens.

#### New Magazine for Physicians' Wives—

The Women's Auxiliary to the AMA is publishing a new magazine, "MD's Wife." The magazine will appear bi-monthly and will replace the quarterly Bulletin of the Women's Auxiliary. Some 90,000 copies will be distributed to members of the AMA Auxiliary, the Women's Auxiliary of the Student AMA, and to officers and headquarters of other women's voluntary service organizations.

#### Cerebral Angiography in the Elderly Patient—

E. B. Siqueira, MD, of the Department of Surgery at the Northwestern University Medical School in Chicago, Illinois reported his observations concerning complications following cerebral angiography accomplished in 65 consecutive patients 65 years of age and older. In his series there were 3 serious complications, 2 of which were fatal, and these occurred in patients with severe cerebral arteriosclerotic disease. The patient who lived developed aphasia and right hemiparesis immediately following the angiogram. When discharged from the hospital one month later, the patient's aphasia had disappeared, but the hemiparesis remained. Three other patients developed convulsions, aphasia, or hemiparesis following the angiogram, but in these three pa-

tients the complications cleared within 24 hours.

Dr. Siqueira concluded: "Cerebral angiography in elderly patients constitutes one of the most important diagnostic tools available and is quite safe if the number of injections is kept to a minimum. Except in emergencies, only one vessel should be injected on a given day. The degree of risk involved does not seem unreasonable and, with careful technique, can probably be further reduced." (*Geriatrics*, October, 1965)

### THE MONTH IN WASHINGTON

President Johnson has signed into law a modified version of the controversial, so-called DeBakey legislation authorizing establishment of regional cooperative programs of research, training and related patient care in the fields of heart disease, cancer, stroke and related diseases.

A total of \$340 million in federal funds will be available during the next three years to help universities, medical schools, research centers and other public or non-profit institutions, such as hospitals, and agencies in (1) planning, (2) conducting feasibility studies and (3) operating pilot projects.

The legislation was amended in the House, as recommended by the American Medical Association, to make it less objectionable to the medical profession. Dr. James Z. Appel, president of AMA, said the some 20 House amendments were substantial and should "allay many of the fears the medical profession had about the original bill."

But even so, the AMA could not support the amended legislation, Dr. Appel said, "because we believe it still introduces an undesirable concept."

The original bill called for establishment of regional medical complexes and would have included "other major diseases."

As enacted into law, the programs are to be carried out "in cooperation with practicing physicians." Patient care is limited to that "incident to research, training, or dem-

onstrations." No patient can receive such treatment except on referral of a practicing physician.

Construction is limited to remodeling and renovation of buildings and replacement of obsolete equipment.

The Surgeon General of the Public Health Service is designated as the official responsible for final approval of federal grants under the program. However, he can act only upon the recommendation of a national advisory council. And an application for a federal grant first must be approved by a local advisory committee. Both the national and local committees must include practicing physicians.

Present federal plans call for starting eight regional programs during the first year and 17 more during the next two years. As of this writing, none of them had been announced.

The Department of Health, Education, and Welfare has ruled that physicians are not required to sign racial nondiscrimination pledges in order to receive payment for treating federal-state welfare patients.

The ruling followed protests of some state medical societies and individual physicians when some state health departments interpreted the new Civil Rights Act as requiring the signing of such a pledge. The societies and physicians protested that such a pledge would constitute an unnecessary federal interference in the patient-physician relationship.

The recent special meeting of the AMA House of Delegates adopted a resolution pointing out that nondiscrimination conditions under the Principles of Medical Ethics and "willingly self-imposed by the medical profession far exceed any pledge of this nature demanded by a federal bureaucracy."

The House Ways and Means Committee has postponed until next year consideration of legislation that would liberalize the so-called Keogh law. The present law permits physicians and other self-employed persons to defer income taxes on a maximum of \$1,250 a year set aside in a retirement



fund. A bill before the committee would increase the maximum to \$2,500 a year.

The Public Health Service reported only 35 cases of polio during the first 34 weeks of this year, a record low for the period. For the same period last year, 65 cases were reported.

During the same period this year, only 96 cases of diphtheria were reported. This figure compared with a five-year median of 244 cases in the same number of weeks.

Dr. William H. Stewart, 44-year-old Public Health Service career officer, is the new PHS Surgeon General.

He succeeded Dr. Luther Terry who resigned to become vice president of the University of Pennsylvania.

Recognized as an expert in the field of public health administration, Dr. Stewart had headed the National Heart Institute since last August. For the previous two years, he served as assistant to the special assistant to the HEW Assistant Secretary for Health and Medical Affairs.

After being graduated from the Louisiana State University School of Medicine, he served in the Army Medical Corps from 1946 to 1948. He gave up a pediatric practice in Alexandria, La., in 1951 to join the PHS Commissioned Corps.

A total of 1,529 physicians will be drafted during the first part of next year. The military needs in Viet Nam made necessary an increase in the doctors' draft over the 852 called last January and the 1,000 in January, 1964.

The 1966 draft will cover physicians who completed their internships from two to five years ago, many of whom now are in private practice.

All those drafted will be given an opportunity to accept officer commissions before induction.

Of the quota, 949 will be for the Army, 266 for the Navy and 320 for the Air Force.

In addition to the physicians, 350 dentists and 100 veterinarians will be drafted.

The Surgeon General's Advisory Commit-

tee on Immunization has recommended community vaccination programs against measles.

The committee said that measles is one of the most important causes of serious illness in children and recommended that continuing "maintenance" programs aimed at vaccinating children about one year of age be established in all communities.

"Additionally, consideration should be given to the concept of full immunization of all children entering schools, nursery schools, etc., since measles transmission in the community occurs principally among children in such settings," the committee said.

"Widespread immunization may be achieved through routine and intensive programs conducted in physicians' offices and immunization clinics in both public health and private medical practice. In some instances, mass community-wide vaccination programs may prove practicable in communities or segments of communities in which immunization levels achieved through routine practice are known to be low.

"If community-wide programs are conducted, cognizance must be taken of the fact that such programs are necessarily more complex than those involving oral polio vaccine, for example, since measles vaccines must be parenterally administered."

## Human Interest Tales

Doctor Louis W. Gilbert, Lincoln, has been elected Chairman of the State Board of Health.

Doctor Meyer Beber, Omaha, has been admitted to the American College of Hospital Administrators.

Doctor James S. Bell, York, in September observed his fiftieth year of medical practice in that community.

Doctor Eugene F. Lanspa, Omaha, has joined the faculty of the Creighton University School of Medicine.

Doctor Abe Greenberg, Omaha, Presi-



dent of B'nai B'rith, was honored at a dinner of the group recently.

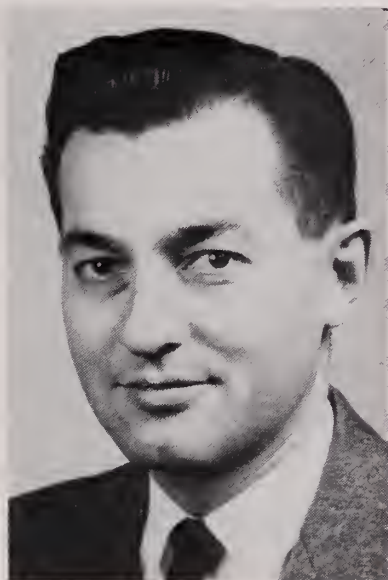
Doctor J. Perry Tollman has returned from Thailand, and is teaching at the University of Nebraska College of Medicine.

Doctor Harry Russell, Grand Island, has moved to Omaha, and is taking a residency in radiology at the University of Nebraska Hospital.

Doctor Fay Smith, Omaha, was in Edinburgh, Scotland, in September, to visit and study the Family Practice Clinic developed at the Edinburg Medical School.

Doctor Paul Bancroft, Lincoln, has retired from private practice and joined the Lincoln State Hospital Staff to work with the program for emotionally and mentally ill children.

## News from Our Medical Schools



Dr. Holthaus to Creighton—

The new position of Associate Dean of the Creighton University School of Medicine has been recently filled by the appointment of Dr. Joseph M. Holthaus, Chief of Staff at Veterans Administration Hospital since 1963. Dr. Holthaus is a 1947 graduate of the Creighton University School of Medicine and was chief of medical service there for seven years before assuming his V.A. appointment.

## TUBERCULOSIS ABSTRACTS

### THE BACTERIOLOGY AND CHEMOTHERAPY OF CHRONIC BRONCHITIS

Drug treatment of chronic bronchitis should not necessarily be delayed until bacteriological reports are obtained. The most important of the microorganisms in this condition is *Hemophilus influenzae*. In long-term chemotherapy, the tetracyclines are the drugs of choice.

Logical chemotherapy must be based on sound bacteriological principles, but this does not necessarily mean that the bacteriologist must always be consulted before a drug is given. In some syndromes the probability that a particular microorganism is causative is so high that "blind" chemotherapy is permissible. Chronic bronchitis belongs to this category.

The prevalence of *H. influenzae* in patients with purulent sputum seems to remain substantially constant from year to year. In contrast, the prevalence of the pneumococcus varies widely in different years and individual isolation rates have little meaning. Further, it seems that the prevalence of pneumococci in sputum cultures does not provide a reliable guide to the true occurrence of the organism in the lung, and it has been demonstrated that pneumococci are often found in sputum, probably as a consequence of contamination from the throat. The true role of the pneumococcus in chronic bronchitis is not easy to assess but there is no doubt that its main importance concerns exacerbations. Chronic pneumococcal infection of the bronchi without coincident *H. influenzae* is common, and when antibiotics eliminate pneumococci, pus does not always disappear.

The bacteriological principles upon which chemotherapy should be based may be summarized as follows: In patients without acute exacerbation but with purulent sputum, *H. influenzae* is the outstanding pathogen and the pneumococcus is probably of minor importance; in acute exacerbations without pneumonia, the pneumococcus assumes greater importance although its prevalence is variable from year to year; if pneumonia complicates bronchitis, there is the possibility of staphylococcal infection although the pneumococcus is the most common organism; there is no clear evidence that organisms other than *H. influenzae* and the pneumococcus are pathogenic in bronchial infections.

Therefore, the chemotherapy of patients without pneumonia should be directed against *H. influenzae* and pneumococci. Fortunately, neither organism readily develops resistance to antibiotics in common use and thus routine sensitivity tests are unnecessary. However, other problems of chemotherapy must be considered.

### SELECTING CHEMOTHERAPY

Patients whose sputum is always mucoid or contains only eosinophil "pus" derive no benefit from chemotherapy whatever organisms are present. Therefore, it is necessary to be sure that true pus is present before chemotherapy is prescribed. Eosinophil "pus" is most common in patients with an allergic history.

The greatest problem is the recurrence of infection when therapy is stopped. Such recurrences are usually associated with *H. influenzae*. The rapidity of recurrence suggests relapse of the original infection, but could mean a reinfection with a different strain.

The tetracycline group of drugs have come to be considered the drugs of choice for long-term chemotherapy since they can be given by mouth and are relatively free of side effects.

In the last decade several clinical trials have been carried out in an attempt to assess the precise value of chemotherapy. A detailed analysis of all the reports seems unnecessary since a number of general conclusions are apparent. Perhaps the most important is the attention that these trials have drawn to the care needed in interpreting results.

### ASSESSING PROGRESS

The objective criteria most commonly used for assessment of progress were sputum purulence and number and duration of exacerbations. But sputum purulence and number of acute exacerbations are not necessarily linked. A patient can recover clinically from an exacerbation sufficiently to return to work although his sputum is still purulent. Likewise, a patient may have lost his pus but be unable to return to work because of increased dyspnea. In general, loss of pus will indicate control of *H. influenzae* — the basic chronic infection. Clinical improvement in an exacerbation may well be due to suppression of a pneumococcus and, since the prevalence of this organism varies from year to year, a given antibiotic may not be equally effective in different trials.

Both intermittent and continuous chemotherapy are valuable forms of treatment if the patients are properly selected. The patient who has occasional purulent sputum but is "mucoid" for most of the time is a candidate for intermittent therapy, while the one whose sputum is purulent throughout the winter must be given continuous therapy.

### OTHER DRUGS

As regards drugs other than the tetracyclines, trials have covered phenoxymethylpenicillin, erythromycin, oleandomycin, novobiocin, sulphamethoxypyridazine, and "sulphatriad." Taking account of all the factors, there can be no doubt that tetracycline itself is usually preferred. Sometimes a combination of tetracycline with another antibiotic will succeed where tetracycline alone fails. Tetracycline in concentrations that can be attained in tissues acts by bacteriostasis.

Bactericidal therapy is theoretically possible with ampicillin. It has been found that the highest concentrations appear in the sputum when pus is present, and as the inflammation subsides the level falls until it can often no longer be measured. The crucial factor in treatment is that the infecting organism should be killed before the sputum concentration falls to the ineffective level. As this fall may occur in only a day or so, it is essential that treatment should be directed toward attaining very high sputum levels in the first few hours. It is clear that the sputum as well as the tissue must be sterilized if relapse is to be prevented. Failure of the antibiotic to penetrate into mucoid

bronchial secretions may explain the failure of bacteriostatic therapy to give more lasting benefit. If the microorganisms in the secretions are inaccessible to the antibiotic and there are no phagocytes present, there is no reason why they should not remain viable indefinitely and able to cause a fresh infection as soon as the bronchial tissue is freed from protective antibiotic.

—J. Robert May, MD, *British Journal of Diseases of the Chest*, April, 1965.

### ANTIBIOTIC PROPHYLAXIS IN ACUTE VIRAL RESPIRATORY DISEASES

Carefully controlled trials have not shown that antibiotics are effective in preventing bacterial complications in the common cold. Any unnecessary use of antibiotics should be avoided.

The common cold is everyone's disease and has caused a profusion of all kinds of nostrums. The great losses from morbidity and great cost of remedies, home and prescribed, necessitate critical evaluation of optimum therapy. Since recovery almost always occurs, evaluation of therapy is difficult.

Prophylactic antibiotics have often been recommended and used in these diseases to prevent bacterial complications. The word prophylaxis literally means prevention of or protection from disease. Prophylactic drugs may be given to prevent disease in a normal person or to prevent complications in a person who is ill. Antibiotic prophylaxis cannot be evaluated when bacterial complications already are present.

Antibiotic prophylaxis of acute respiratory disease is generally based on the hypothesis that viral infections lower the resistance of the host and allow the normal bacterial flora to cause infections.

Experience has shown that the risk of superinfection or the acquisition of a new organism is high with broad-spectrum antibiotics and not insignificant with penicillin. The concept that antibiotic prophylaxis will regularly suppress the normal flora has not been substantiated.

Since the effect of placebo on symptoms in acute respiratory diseases has been established by controlled studies, it is essential that therapy trials be double blind. Results with the drug under study should be compared with those of a placebo or with symptomatic treatment, and neither the patient nor the physician should know which patient receives which treatment.

Since even experienced clinicians may miss streptococcal disease and since streptococcal infections will respond to antibiotics, it is essential in these trials to exclude streptococcal disease.

### TRIALS REVIEWED

In a review of a number of controlled trials among children, adult volunteers, and military personnel, both in the United States and Great Britain, it was found that the use of antibiotics was not effective in preventing complications of



measles, influenza, or the common cold when streptococcal disease was excluded.

In fact, neither continuous nor intermittent antibiotic prophylaxis has been shown to alter the clinical course or reduce the complication rate of these diseases.

It must be recognized that the type of population studied may have an effect on the outcome of the trial. For example, the results of trials on military personnel may have only limited application. Military populations are composed of essentially healthy young adults. Many military bases have no place other than the hospital to care for mild illnesses. Consequently, military hospital patients may represent milder disease than that seen at a civilian hospital.

Civilian study populations may differ also. Only the more severe cases may be admitted to a hospital. Furthermore, many civilian hospital patients may have rheumatic heart disease, emphysema, bronchiectasis, or some other chronic disease.

Some British groups have reported beneficial results from antibiotic prophylaxis in groups of miners with pneumoconiosis, children with recurrent infections, and others.

These findings cannot be reconciled with those of well-controlled trials in which antibiotics were not found effective. Possibly a factor in the British trials is the prevalence of chronic bronchitis, in which prophylactic antibiotics have proved effective.

#### DEFINING COMPLICATIONS

Even in the face of certain reservations about some of these trials, it is apparent that prophylactic antibiotics will not alter the primary course of acute respiratory disease and will not prevent bacterial complications in healthy persons. Additional trials are needed in special groups such as children with congenital heart disease, pregnant women, and patients with chronic pulmonary diseases, since prophylactic antibiotics have not been thoroughly evaluated in these conditions.

A problem central to all these trials is the definition of a bacterial complication. The appearance of a new sign or symptom does not necessarily represent a complication and is not always an indication for antibiotics.

Pneumonia may be taken as an example of the problems of defining a complication. Influenza viruses can cause pulmonary infiltrates. Pneumococci are often cultured from sputum or pharyngeal swabs of normal persons. Thus, a sputum culture positive for pneumococci from a patient with influenza and a pulmonary infiltrate is not necessarily proof of a bacterial pneumonia. Perhaps the problem of proving bacterial pneumonia in patients with viral respiratory disease could be approached with frequent, quantitative bacterial counts of the sputum or by lung puncture.

The appearance of new signs or symptoms is not adequate proof of a bacterial complication of acute respiratory disease but is an indication for further examination or tests.

Sometimes it is said that antibiotics may not help the patient but at least they will not hurt

him. The use of antibiotics without reasonable indication is no more rational than the administration of digitalis to a patient without heart disease or morphine to a patient without pain. Antibiotics often cause harm. They are potent agents and should not be given frivolously.

As a guide to therapy, the following statements are now well substantiated:

1. The great majority of acute respiratory illnesses are not bacterial.
2. Antibiotics have no effect on the primary course of viral respiratory diseases and thus have no place in their primary treatment.
3. Prophylactic antibiotics have not been shown to prevent bacterial complications of acute respiratory disease and are not generally indicated.

The patient with measles or influenza with a pulmonary infiltrate is not a problem of prophylaxis but of differential diagnosis. Patients with a cough but without pulmonary infiltrate can usually be managed without antibiotics. The more seriously ill patients require careful evaluation and appropriate cultures. There is little disagreement about the use of antibiotics in the severely ill patient when bacterial pneumonia cannot be excluded.

—Starkey D. Davis, MD, and Ralph J. Wedgwood, MD:  
*American Journal of Diseases of Children*, June, 1965.

#### Ability of Men to Return to Work After Cardiac Infarction — D. C. Sharland, (St. Pancras Hosp, London), *Brit Med J* 2:718 (Sept.) 1964.

A consecutive series of 212 men under the age of 60 selected for a dietary trial were studied with respect to their ability to return to work. Three months after the initial infarct 55% of men were back at work, at six months 82% were back, and at one year 86% were back at work. A review of the work subgroups at six months showed (1) part time work was a temporary phase leading on to full time work, (2) those at a different job had more often been in the class of unskilled worker, (3) the small number not at work and who had not relapsed did not show any distinguishing features in the severity of the initial infarction, their social class, or the physical activity of their previous work.

~~~~~  
DOCTOR — Does your wife like to read the Auxiliary news? Then be sure and take your copy home.  
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# Books



**Bone Tumors (3rd Edition)** by Louis Lichenstein, M.D. Published September 1, 1965 by The C. V. Mosby Company of St. Louis, Missouri. 411 pages (7" by 10") with 251 illustrations. Price \$16.75.

The author of this book is a Clinical Professor of Pathology at the University of California in San Francisco. Previous editions have been published in 1952 and 1959.

Although there has not been any "explosion" in the area of bone tumors, as there has been, for example, in the fields of genetics and nucleoprotein chemistry, many significant observations have been made since 1959, and this information has been incorporated to advantage in the present text. The orientation of this book is such as to supply the practical answers that the pathologist requires, and the information that the surgeon and radiotherapist need to treat their patients as successfully as circumstances will permit. A new chapter has been added on benign and malignant chondroid tumors. The chapters dealing with non-osteogenic fibroma (fibrous cortical defect), benign osteoblastoma, giant-cell tumor, chondrosarcoma, osteogenic sarcoma, and fibrosarcoma have been substantially rewritten.

A section of special interest is that dealing with non-neoplastic-bone lesions frequently mistaken for tumors. This book will be especially valuable to those doctors working in the fields of pathology, radiology, and orthopedics.

**Atlas of Cataract Surgery** by John M. McLean, M.D. Published August 10, 1965 by the C. V. Mosby Company of St. Louis, Missouri. 130 pages (9" by 11¼") with large illustrations. Price \$20.00.

The author is a Professor of Clinical Surgery (Ophthalmology) at Cornell University Medical College in New York City. His book is the outgrowth of more than 25 years of teaching residents and giving courses at the meetings of the American

Academy of Ophthalmology. It is an attempt to put into illustrative form with some detail those methods which have proved most practical in his teaching. Since these techniques have been evolved over the years by adapting modifications of modifications, and since many of the instruments and methods are variously ascribed to different surgeons in different clinics and countries, all proper names have been omitted. No bibliography is included, since these are available elsewhere.

This book is meant to be a practical instructive manual from the operating surgeon's viewpoint. Even the illustrations are oriented as the surgeon sees them. This is a fine atlas for those interested in this field.

**Evaluation of Liver Function in Clinical Practice** by Carroll M. Leevy, M.D. Published in August, 1965 by The Lilly Research Laboratories at Indianapolis, Indiana. 94 pages (7½" by 10½"), profusely illustrated, with many illustrations in color. Price not listed. (Note: It is believed that this book can be secured without charge by writing to the publisher).

The author of this book is a Professor of Medicine at Seton Hall College of Medicine in Jersey City, New Jersey. Chapter headings include the following:

1. Physiology and Anatomy of the Liver
2. Clinical Recognition of Liver Disease
3. Laboratory Recognition of Liver Disease
4. Circulatory and Lymphatic Systems; Functional Evaluation
5. Biliary Passages; Functional Evaluation
6. Reticuloendothelial Cells; Functional Evaluation
7. Parenchymal Cells; Functional Evaluation
8. Functional Evaluation of the Liver in Practice
9. Drug-induced Liver Injury

This is an excellent book.

**Neonatal Hepatitis and Its Relation to Viral Hepatitis of Mother** — K. Aterman, Amer J Dis Chil 105:395 (April) 1963.

The unusual case of a mother, who had given birth to 6 normal children before and 2 children with giant cell hepatitis after an attack of infectious hepatitis, is presented. This case prompted a review of the problem of neonatal hepatitis in general, and of its relation to viral hepatitis of the mother in particular. Attention is drawn to the similarity of the neonatal hepatitis to the sub-acute viral hepatitis in adults. On the basis of some of the observations in the extensive literature on the subject, the suggestion is advanced that giant-cell hepatitis of infants is caused by the agent which gives rise to the viral hepatitis in adults, but which has become so modified by the carrier-mother, that it no longer produces an acute, fulminating form of hepatitis in the infant.

#### NOTICE TO ALL CONTRIBUTORS

The deadline for items to appear in the following issue of the JOURNAL is the 10th of the month. The JOURNAL goes to press on the 12th.

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### Vocational Rehabilitation Administration

Mary E. Switzer, Commissioner, Washington, D.C.



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**Nebraska Public Health Association**  
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**Nebraska Radiological Society**  
Jack Zastera, M.D., Secy.-Treas.  
816 Medical Arts Bldg., Omaha, Nebraska

**Nebraska Rheumatism Association**  
Vernon G. Ward, President  
5 West 31st Street, Kearney, Nebraska

**Nebraska Society for Crippled Children**  
S. Orson Perkins, Director  
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**Nebraska Society of Anesthesiologists**  
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1315 Sharp Building, Lincoln 8, Nebraska

**Nebraska State Nurses Association**  
Mrs. Zelda Nelson, Executive Director  
510 Securities Building, Omaha, Nebraska

**Nebraska State Obstetric and Gynecologic Society**  
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**Nebraska State Orthopedic Society**  
Harold Horn, MD, Secretary  
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**Nebraska State Pediatric Society**  
Otto Rath, M.D., Secretary-Treasurer  
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**Nebraska, South Dakota, North Dakota District Branch of the American Psychiatric Association**  
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**Nebraska Urological Association**  
Louis W. Gilbert, MD, Secretary-Treasurer  
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**Omaha Mid-West Clinical Society**  
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(Please help us keep these addresses correct, by notifying the Editor of any changes).



## THE NEBRASKA STATE MEDICAL JOURNAL

## DECEMBER

We wanted something that would say winter and Nebraska and Christmas. So we leafed through scenes of icicles on branches and pictures of snowy hills and rabbit tracks, and lo! there was the wonderful Minden courthouse. Now, we could have shown you the State Capitol in Lincoln, all lit up for the holidays, but you see the Capitol in our other issues. Minden (latitude 40 degrees, 30 seconds; longitude 99 degrees) is called "The Christmas City." It is 180 miles west of Omaha and 325 miles east of Denver; it was founded in 1876, and is the county seat of Kearney county. It was named after its first postmaster's home in Germany.

The courthouse lights are turned on early in December and are burning brightly as the year changes; the tradition, and an accompanying pageant, was begun in 1915. We do not pretend to the wisdom of the Magi, but we are wise enough to know a wonderful picture when we see it.

We found just what we were looking for. It is a beautiful thing and it says everything we wanted. *Nebraska is beautiful; winter is here; Merry Christmas.*

F. C.

## THE BATTERED PHYSICIAN

The doctor has always played other roles in addition to attending to the physical ailments of mankind. He has been father confessor, confidant, psychologist, family friend, often civic leader, and advisor. He has in the past been required to do things requested by the law, while at the same time treating the patient; and some of these pertained to medicine while some did not. He has had, for example, to report instances of certain diseases; in several cases the patient might not reasonably object, while in other obvious areas, as in venereal disease, the patient-doctor relationship and the theory of privileged communication seemed to contradict his adopted policy. He has been required to report wounds that seemed to have been

criminally inflicted. And now, while caring for a hurt child, he is being asked to report suspicious or deliberate injury. The problem is an interesting one; it gives rise to others, and it is not easily disposed of. Will he play the part of detective and policeman? Is the incidence of child beating increasing? Shall he adopt the point of view that this is a matter for the law, and not his concern? Is he his brother's keeper? If he does not report his suspicion and the child is injured again, perhaps fatally, has he neglected his duty? Is his communication privileged? And if he reports what he believes has happened, or merely may have happened, what is his legal position if his suspicions prove false or simply unproven? How will he steer between the Scylla of neglect and the Charybdis of destructive litigation?

The physician is being battered by a series of legislative blows that rise to plague him on every side: Medicare, gunshot wounds, HR 3140, fee schedules, draft inequities, injured children, disability evaluation, "Good Samaritan Laws" (30 states have them, and they vary to a large extent), and adoption laws. Things seemed better in the old days, when we could practice with a freer hand, according to our judgment, and without incurring penalties. It is important for us to know the difference between regulations and laws, how regulations change from place to place, what we are required to do, and exactly what the laws say. Must we vaccinate, are we required to isolate? Should a PKU test be mandatory? Must babies get drops in their eyes? There are the rights of the individual and those of the community, and the ever thinner dividing line. We cannot allow disease to run rampant, and we are becoming increasingly reluctant to give up our personal freedom and our individual rights. This is true of the entire citizenry, but particularly of the doctor.

LB 73 refers to "a wound or injury of violence which appears to have been received in connection with the commission of a crim-

inal offense." LB 444 has to do with "severe physical injury" that has been "willfully inflicted upon any child, or any incompetent or disabled person by the parent, guardian, or temporary or permanent custodian of such person." Reporting is to be made in the first instance to the chief of police or the sheriff, to the county attorney in the second. But we wonder: what is an injury of violence, how can we deduce (if we do not know) the circumstances surrounding the injury, what is starvation, how do we determine what was willfully inflicted, and did not the first law include the second? Well, that's the law, and perhaps these are good laws, but some emotion and a great deal of axe-grinding seem to have attended their passing. Meanwhile, it will do us good to think about them, and above all, to know what they say.

When we report communicable disease, it is one thing. It serves a medical purpose and it is required of us. Criminally inflicted wounds of violence may be spelled out for us (LB 73); failure to report carries a penalty (so does "willfully" LB 444), and this only very recently. The battered child presents a unique and a difficult problem. How well are we protected when we notify the courts of what cannot be demonstrated? The laws differ and the laws change. The times change, too, and we change with them. Suspicions of child-beating, even fatal, are far from new. Forty-seven states now have legislation relating to the reporting of physical abuse of children; reporting is mandatory in 41 states. Nebraska was added (LB 444; it grants immunity from civil suit to the reporter, provides for action by the county attorney, and provides a penalty for failure to report such injuries) in 1965. We feel for a deliberately injured child and want at all cost to prevent further harm. If the purpose of the law is to prevent further and more serious injury, our duty becomes clear. It is important to know, too, if all of this is fruitful, or if, after reporting, the child is misguidedly given back to be injured again. The incidence of child battering (it is supposed to have occurred five times in a series of 80 crib deaths) may possibly range from  $10^2$  to  $10^3$  per year.

In this issue of the *Journal*, we present two articles dealing with this problem. Let us see what has already happened.

F. C.

#### MR. HODSON'S REMARKS

One of the very best parts of the October Special Convention of the AMA House of Delegates in Chicago was Mr. Hodson's talk. We were more than impressed; we were educated. He told us what we may and what we may not do, and how, and why. Mr. Hodson answered all our questions; we are pleased to reproduce his "Remarks." We hope you will all read them; you will be impressed, too.

F. C.

#### WHAT'S NEW IN PEDIATRICS

Knowledge concerning the exact nature of the allergic reaction is advancing as well as newer and better methods of treatment of allergy. Several surveys of the general population in various parts of the United States have shown that about 15 per cent of adults and 25 per cent of children suffer from some type of major allergy. There also seems to be an actual as well as apparent increase in the number of allergic persons. Particularly, asthma in children seems to be increasing, as well as deaths in children caused by asthma. Since the eastern half of Nebraska and the Middle West in general has more kinds of pollen-producing plants, and the production of pollen is greater than in most other areas of the country, our allergic problems are greater. The allergic child presents a more serious problem than the allergic adult. The younger the child, when allergy is first recognized, the more important it is that he be treated to the best of our ability.

There is a progression, or pattern, through which most allergic children move as they grow older. Interruption of this allergic progression at any stage would seem to help prevent the development of more serious stages, such as asthma. In allergic children there is usually a history of allergy in the immediate family so that the physi-



cian is warned that allergy is a distinct possibility in his patient. Proper feeding, environmental control, and hyposensitization can be used in the youngest patient.

The first allergic manifestation of allergy in infancy is usually intolerance to cow's milk. Vomiting, diarrhea, and colic are common, and frequent formula changes are usually made. At the same time or later eczema makes its appearance. The gastro-intestinal symptoms and the eczema usually resolve themselves by the age of one or two years, to be closely followed by rhinitis. These are the children who have frequent or continual "colds." Allergic rhinitis in toddlers is frequently caused by sensitivity to house dust. The perennial type of rhinitis may improve as the child grows older and his nose is no longer at the level of the overstuffed furniture, and his play is not confined to the floor. Usually at about the age of four or five years the allergic child develops exacerbations of rhinitis during the hay fever season. His eyes become involved, and in severe cases he will begin to have asthma toward the end of the season. About half of the children with hay fever may be expected to develop asthma, and an even greater number of those who have perennial rhinitis.

As the seasonal attacks of asthma continue, the child begins to have more severe attacks, and they begin to occur throughout the year, being precipitated by respiratory infections, barometric changes, emotional upsets, and the like. By now, the child is an allergic cripple, and unable to carry on normal activities for his age. What part childhood asthma plays in adult emphysema is a moot question at present, but it is likely a factor.

All allergic children do not follow the pattern outlined here. Some children will develop asthma, hay fever, or eczema as the first evidence of allergy. On the other hand, all the manifestations or any combination of allergy may be present in the same patient at the same time. Children do sometimes "outgrow" allergy, but they are few, and there is no way to tell which child will be so fortunate. More likely he will "grow into"

allergy of a more severe type. Physicians who do not treat allergic children, and advise the parents that they will "outgrow" their symptoms, do them a disservice.

The traditional and proven method of treating allergy, when the patient cannot be removed from the allergen or the allergen from the patient, is specific hyposensitization. After the allergens are determined through history and by skin tests, hyposensitization is accomplished by the injection of allergenic extracts in increasing amounts and at frequent intervals until the "tolerance" of the particular patient is reached. This dose is then maintained at frequent but slightly longer intervals until symptoms are alleviated. For many years rather simple defatted aqueous suspensions and solutions of the allergens have been used with good results. Much care must be taken in increasing the dose, and the treatment individualized, so that severe constitutional reactions, which can be fatal, do not occur.

In more recent years emulsion therapy has been used by some allergists. In this method, large amounts of specific allergens are emulsified in oil, and when injected into the patient, a depot is formed from which the allergen is gradually absorbed. The emulsion must be a perfect one, and the mechanical difficulties, frequency of constitutional reactions, as well as production of nodules and chronic abscesses, have caused many allergists to abandon this method.

Recently there has been placed on the market a new type of allergenic extract called Allpyral®. These are specific single or multiple mixtures of allergens. They are pyridine — extracted, alum — precipitated, aqueous suspensions in saline allergens. This type of extract has many advantages. It is more effective in controlling the symptoms of allergy as all the allergenic factors are present. Larger doses can be tolerated, it is repository in that it is gradually absorbed over days and weeks, and injections can be given at less frequent intervals than when the aqueous extracts are used. Only about half as many injections are required. No nodules, abscesses or severe constitutional re-

(Continued on page 634)



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## Comments from Your President

During the six months, as President of the Nebraska State Medical Association, I have attended six major meetings with your AMA delegates, Past Presidents, the committee chairmen, President-elect, and your very efficient executive staff. On some occasions we have been joined by staff members of the AMA. Some of our members have actively participated, with distinction, in most of these meetings. I have never witnessed, particularly during the two sessions of the House of Delegates of the AMA, such a display of democracy. This is a fact that "port side" press representatives fail to record about the deliberations and proceedings of the House.

On a few occasions I have left some of the proceedings bewildered and disturbed by the presentation and comments of some of our superiors. But as each week goes by, I can assure you that the representatives of the AMA have not, as stated by President-Elect Charles A. Hudson, presented at any time an attitude of supplication in their direct dealings with the White House and its staff since Medicare became a law. On several occasions they have pointed out the problems presented by other legislation that is not right and it has been altered. The most recent example is the DeBakey Bill.

More recently members of the AMA have been active, working with Health, Education and Welfare on problems involving physician participation, physician reimbursement, provider participation, administrative agent, special services in hospitals, and psychiatric service. At present, it seems almost impossible to make this law palpable with its burdensome rules and regulations. The only encouraging feature about these meetings is the realization of HEW, that



the law cannot work without physician's help. At present, there is atmosphere of sweetness and light but this I am sure will not prevail for long.

The major problems at present, are the standards for hospital eligibility who will be providers of services, the utilization committees, and the carrier. These must be controlled by physicians through their medical societies or hospital staff. It is possible for hospital administration and a carrier to become a dictator. These are also the three most likely areas that our Federal Supervisors will take over in their remarkable, arrogant way. These problems are now being studied by the Governors Committee on Medicare and members of your Policy Committee. There will be definite guide lines established by the Nebraska State Medical Association for the physician, his local society and hospital staff to refer to.

In this season of thanksgiving and goodwill, let us be thankful that "Professional Responsibility" is not a dead issue.

W. D. WRIGHT,  
President

# Legal Implications of the Battered Child Syndrome\*

**I**T is gratifying to me, as an attorney, to have this opportunity to visit with you today concerning the battered child syndrome. It has been my experience in the past, largely through work on the constitutional amendment (25th) on presidential disability, that whenever the medical and legal professions join forces to combat public problems the citizens are the beneficiaries. This has been especially true with the history of the battered child legislation in the state of Nebraska.

A year or so ago I was appointed chairman of a study committee at the Nebraska Committee for Children and Youth. The assignment given to the committee was to review the problem of the battered child as it existed in Nebraska and propose legislation if any was needed. It became apparent to us at the outset that remedial statutes were necessary for the protection of children in this state. Our committee included members of the bench and bar, as well as the distinguished Grand Island pediatrician, Dr. Warren Bosley, who drove a goodly distance to attend our meetings on a regular basis. And I am also happy to express publicly my appreciation to Dr. Robert W. Gillespie whose studies within the state of Nebraska were of incalculable assistance to us. And one cannot discuss the work of this committee without expressing gratitude to the Nebraska State Medical Association which gave its full support to us at every stage of our study.

I was fortunate enough to be able to "follow through" on the legislation in a later capacity as legislative counsel for the Nebraska Committee for Children and Youth.

In order to relate the problem of the battered child syndrome to your own experience I am going to discuss it in terms of this study, made here in Nebraska, and the resulting legislation; Legislative Bills

RICHARD HANSEN, LL.B.

444 and 445 which have been passed by the legislature and signed by the Governor. These have already gone into effect since they carried the emergency clause.

The initial phase of the study made by the Nebraska Committee for Children and Youth was assisted greatly by previous studies made by the American Medical Association, the Council of State Governments and the American Humane Society, all of whom proposed model laws.

All of these model laws focused on two central problems:

- a. reporting of battered child cases, and
- b. subsequent legal action, where necessary to protect the welfare of the child.

The Nebraska legislation is noteworthy in that it is not confined to "battered children" only, but, at the request of the Nebraska State Medical Association, has been extended to cover all of those who are unable to help themselves. So it is that Section 1 of LB 444 provides for reporting of severe physical injuries, willfully inflicted, upon "any child, incompetent, or disabled person" by the parent, guardian, temporary or permanent custodian of such person. Thus, the law is extended to cover those who are feeble-minded or aged and incompetent in nursing homes, to mention just one of the categories which are now covered.

It is important to note the words "willfully inflicted" in this legislation along with the term "severe physical injury." This section is intended to obviate the case of the prying next-door neighbor who attempts to create scandal by reporting a simple instance of a

\*Address at the Tenth Annual "Trauma Day," Eppley Institute, University of Nebraska College of Medicine, Omaha, May 20, 1965.



parent spanking a child, where no "severe physical injury" has been "wilfully inflicted." These words were considered and reconsidered by the committee at various stages and were the subject of debates in the legislature at the hearings. They afford adequate protection to normal parents and also offer guidelines for the county attorney in determining which cases should be prosecuted.

The second section of the legislation is particularly of interest to the medical profession, inasmuch as it provides that the information contained in any report to the county attorney concerning such an injury "shall be absolutely privileged and shall not constitute slander, libel, breach of confidence, or invasion of any right of privacy." This affords protection to the person reporting the case — usually the doctor. The law also provides that the county attorney shall immediately cause a report to be investigated by his office or any agency designated by him for that purpose. Thus, he could call upon the resources of private welfare agencies if the county welfare were too busy, which could conceivably happen in the larger counties in the state. And then the county attorney is instructed, upon completion of the investigation, to take "such action as may be necessary to prevent further injury to the child, the incompetent or disabled person." It is contemplated that this action will take the form of removing the child from the home under the juvenile court act, prosecuting the parents, guardian or custodian if necessary, or the filing of a mental health complaint.

The question of a penalty for failure to report was probably the source of the fullest discussion by all the members of the committee. At least five different penalties were considered and the committee discussed, at several stages, whether or not any penalty at all should be required. The philosophy behind the final penalty which was agreed upon by the committee (fine of \$100) was that the mere fact of conviction of a professional man is enough of a stigma; that the money involved is purely secondary.

One of the most irritating aspects of the

entire problem, on the part of the doctors, has been the failure of law enforcement officials to prosecute in cases where the medical conclusion was clearly that the child had been physically abused. While not wishing to minimize or excuse unjustified hesitancy or meekness on the part of a very few law enforcement officials, for the most part this feeling has resulted from a failure to comprehend the evidentiary problems which law enforcement officials have heretofore faced under the laws of Nebraska.

This evidentiary problem existed because of the provision in Nebraska law creating a privilege between the doctor and the patient. The question which arose in the battered child cases was whether or not a parent, accused of an assault and battery against his own child, could assert the privilege as a barrier to the doctor's testimony since the child was still a minor. An opinion by the Attorney General of Kansas, interpreting the laws of that state held that the privilege could not be asserted under such circumstances; however, the laws of Kansas were worded a good deal differently from the statutes in the State of Nebraska. Our laws state quite clearly that parents are the natural guardians of their children until the child attains his majority. And decisions of the Nebraska Supreme Court are replete with instances where the natural rights of the parents have been upheld. Therefore, in order to remove any doubt about the question, the study committee proposed LB 445 which has the effect of waiving the doctor-patient privilege in judicial proceedings regarding children, incompetents, or disabled persons.

The study committee was not unaware of the legal history of "privileged communications." This history has not been generally understood. Misconceptions led to some very interesting questions posed to the study committee. For instance, several social workers said that they felt the privilege should be waived with regard to their profession. However, "privilege" is a creature of statute, and, traditionally, has been awarded by the legislature to only three fields: confessor-penitent (which in modern days includes confidential communications



to ministers in the course of counseling); the attorney-client privilege and, of course, the doctor-patient privilege. Because of the fact that the matter of the doctor-patient privilege has been essential to the creation of confidence between the doctor and his patient the committee was extremely anxious that the waiver apply only to cases in this specific area. Therefore, the following clarifying language was included in the legislation:

"The rights and privileges conferred by (the law) as to any physician or surgeon shall be deemed to be waived in any judicial proceeding under sections 43-201 to 43-227 regarding injuries to children, incompetents, or disabled persons, or in any criminal prosecution involving injury to any such person or the willful failure to report any such injury. The criteria for waiver of the privilege . . . shall also be binding upon the personal representative of a deceased person who institutes any action, which involves injuries to or the death of a deceased person as an issue, or in which the physical or mental condition of the deceased person is an issue."

It was felt that this restriction upon waiver of the privilege afforded adequate protection to both the doctors and the abused children.

I have referred to the fine cooperation which was obtained in this instance between the medical and legal professions. The final meetings of the study committee saw in attendance representatives of the Nebraska State Bar Association as well as of-

ficers of the Medical Association and of the Governor's office.

The final meeting had a dramatic element which underscored the necessity for this legislation in the State of Nebraska. Dr. Gillespie has referred in his talk today to an instance of child abuse in the city of Lincoln where the prosecution was unsuccessful because of the evidentiary problem. The case to which he referred was also mentioned in the early hearings of the study committee. On the day of the final meeting, some twenty minutes before the committee was to meet, I received a call from Dr. Gillespie indicating that this unfortunate child had been the victim of a second attack and had been brought to St. Elizabeth's Hospital in Lincoln, dead on arrival, just shortly before the telephone call. I relayed this information to the study committee and very shortly thereafter the legislation was recommended unanimously. This little child, a tragic victim of the inadequacy of our previous law, was destined to play a part, through his death, in the enactment of remedial legislation.

As Dr. Brown has indicated in his talk, the common thread of experience which runs through most of these cases is not economic, but one of mental illness on the part of the parents involved. And I would heartily agree with both Dr. Brown and Dr. Gillespie that the next phase of this problem to which society must address itself is the treatment of the family as a unit psychiatrically. I am sure that the medical profession will find strong support in this effort from its brothers at the bench and bar.

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"The results so far obtained in the countries where drug research has been completely state-controlled are very meager indeed . . . One can say without exaggeration that not a single really novel drug in any field of pharmaceutical science has come from these countries." (Prof. Ernst B. Chain as quoted in Pageant, p. 155, December, 1964).

# Wilful Abuse of Children

**O**NLY in the last decade has the wilful abuse of children been recognized as a common problem. In the practice of neurosurgery, head injuries constitute the majority of cases. The author first became aware of the "syndrome of the battered child" in 1962.

A five year old girl was admitted to an Omaha hospital in a deep state of coma with shallow, irregular respirations. There were multiple bruises over the trunk and extremities. Large hematomas were present in the frontal and occipital regions. The left pupil was widely dilated and did not react to light. A swollen, deformed elbow suggested a probable fracture dislocation. Bilateral subtemporal decompressions with drainage of bilateral subdural hygromas failed to alter the progressive clinical course and the child expired 36 hours after the injury.

The probability of wilful abuse was suspected immediately because the extent of the injury was not compatible with the history obtained. Subsequent investigation by police officers indicated that the mother was not at home when the child was injured. A man had been living with the child's mother while her husband was in the service. He was taken into custody and interrogated repeatedly for one week. The suspect related several different accounts of the injury while being questioned with the use of a polygraph but he never admitted wilful abuse. It was learned that the child had suffered repeated injuries at times when the suspect was the only person present. On one such occasion the child went to school with multiple bruises and told her teacher that her "father" had beaten her. He was questioned by police officers at that time, and he claimed that she fell down some stairs. When he was released from custody after the fatal abuse, the attending physician wrote a letter to the county attorney outlining the medical facts, which in his opinion, indicated that the injury was an instance of wilful abuse. The county attorney stated that the evidence was not sufficient to bring the suspect to trial.

KENNETH M. BROWNE, MD  
Omaha, Nebraska

He asserted that even if the accused had confessed, the courts would not likely accept the legality of the confession in view of the prolonged questioning of the suspect while he was being held in custody without counsel.

Several points can be made regarding the role of the attending physician in cases of head injury in children in which wilful abuse may be involved. Like most problems in diagnosis, wilful abuse must be suspected in order to be detected. Whenever an infant is seen whose injuries are not compatible with the history obtained, or when the circumstances attending the injury are suspicious, the attending physician should entertain the idea that a wilful injury may have been inflicted and he should attempt to satisfy himself such was not the case. In this regard, it is desirable to question the available informants separately and without arousing their suspicions that foul play is suspected. One member of the family may concoct a story which will be supported by others, perhaps under duress. The doctor has a distinct advantage over the suspect because of his knowledge of medicine and the extent of the injury. The suspect's explanation of the injury may be logical to him and yet be highly unlikely or even obviously untrue in the light of the medical facts. For the same reason the doctor may be of great value to the police in their investigation. An example of such a case occurred in the author's practice a few months after the case described above. A five week old infant was admitted in an unconscious state. The mother stated that she returned from church to find the infant crying in his crib. When multiple skull fractures were found on radiographic studies and the family was informed that the child had been injured, the father denied any knowledge of the injury. When he was about to be questioned in conjunction with a polygraph, he admitted in-

injuring the child by accidentally dropping it. After he was confronted with medical evidence of multiple injuries, he confessed he had inflicted them by striking the infant repeatedly. As the result of this case being recognized as one of wilful abuse, the father was placed under the care of a psychiatrist, the child was removed from the jurisdiction of the father, and a subsequent fatal injury was perhaps prevented.

A second important rule in the diagnosis of wilful abuse to infants or children is to search carefully for any evidence of previous abuse. Most instances of fatal abuse are preceded by other instances of abuse. In the case of suspected wilful abuse of an infant a skeletal survey may be of value.

The third rule in dealing with possible wilful abuse in children is to report promptly all suspected cases. In most localities this report should be made to the city police. Understandably, a doctor may hesitate to report such a possibility when the suspect is a parent or a patient, but the doctor incurs no liability in reporting instances of possible wilful abuse including "privileged" communications with the parents or family of the

abused child and in fact, he is required by law to do so in many states.

It is a relatively simple matter for an adult to inflict even a fatal injury to an infant or a child and to escape detection in the absence of witnesses if the attending physicians are not alert to the possibility of wilful abuse. For this reason it becomes the responsibility of the doctor to satisfy himself beyond any reasonable doubt that the explanation of the injury given by the informants is consistent with the injury sustained. He should also attempt to verify the account of the injury by witnesses or if this is impossible, he should question informants separately and be alert to discrepancies in their stories.

A careful search for possible previous child abuse should be made by interviewing all available informants, by study of records of previous hospitalizations, and by the use of a skeletal survey in appropriate cases. Finally, the attending physician must accept the responsibility for reporting all suspected cases of wilful abuse of children, for he alone is often the only protection the child or siblings have against subsequent and perhaps fatal abuse.

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"In this era when our way of life is being sorely tested by pagan philosophies, it is well for us to remember that the tap root of democracy is in the home. The home is the basic institution for the physical, emotional, social and spiritual development of the child." (From a sermon by Rev. Robert E. Palmer, Westminster Presbyterian Church, Lincoln, Nebraska, "I'll Cry Tomorrow.")



# Dermatology —

## QUESTIONS AND ANSWERS\*

Dr. Crotty

Today we are particularly honored in having with us our guest speaker from the dermatology section, Dr. Paul Crossland, who is a Clinical Associate Professor of Dermatology at Stanford University School of Medicine. Members from our section who are representing us today are Dr. William E. Kelley, Professor of Dermatology at Creighton University School of Medicine, and Dr. George F. Pinne, Associate Professor of Dermatology at University of Nebraska College of Medicine.

One of the most popular questions being asked of us today is in regard to a drug which has been with us for the past five years, and is being used by everybody — that drug is griseofulvin. I would like to begin our discussion by asking Dr. Crossland if he has seen any complications or side effects, from griseofulvin?

Dr. Crossland

There are very few side effects from griseofulvin. Even people who are sensitive to penicillin are not sensitive to griseofulvin, even the drugs are chemically related. Occasionally a light sensitive eruption may develop from griseofulvin. Some patients are unable to tolerate griseofulvin because of nausea or gastro-intestinal disturbances. Children who take griseofulvin for tinea capitis seem to tolerate it very well. Its effectiveness is another matter. The micronized or ultra-fine griseofulvin gives a higher blood level than the regular griseofulvin which we had several years ago.

Dr. Crotty

Any other comments from members of the panel? Dr. Pinne, have you seen any?

Dr. Pinne

I would like to add one more statement. This drug is neurotoxic to a few people, and

## — Panel Discussion —

— Chairman —

RICHARD Q. CROTTY, MD

Assistant Professor of Dermatology,  
Creighton University School of Medicine  
Omaha, Nebraska

— Participants —

PAUL M. CROSSLAND, MD

Clinical Associate Professor of Dermatology,  
Stanford University School of Medicine  
Palo Alto, California

and

WILLIAM E. KELLEY, MD

Professor of Dermatology,  
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and

GEORGE F. PINNE, MD

Associate Professor of Dermatology,  
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what happens is that the patient receives a prescription for 50 tablets at a cost of about twenty cents each. The first tablet that he takes gives him the worst headache of his life, and he doesn't know what happened to him; and the following day tries it again and here we go with another headache which puts him out of business, it is so violent. Then he realizes that he cannot take this pill, but he has 48 of them left which he can't get rid of and get his money back. So, there is that side effect which I have learned from experience does exist.

Dr. Crotty

Dr. Kelley?

Dr. Kelley

It is a drug related to the penicillin derivatives. We have seen two cases of giant urticaria type reactions, and I know in the literature, we haven't seen it, but there are cases of porphyria from this drug. In regard to Dr. Crossland's reference, I think that the micronized preparations have more tendency to get better absorption and are more likely to produce reactions. Also, I think that this brings us to another point

\*This panel discussion was on Monday, October 26, 1964 at Omaha Mid-West Clinical Society 32nd Annual Assembly.

along this line. What are the indications for griseofulvin? It is probably one medicine that we are all over-using. Dr. Pinne, would you care to say something about indications for griseofulvin?

Dr. Pinne

Well, griseofulvin is the best medication for ringworm of the nails. That is its greatest effect. There are certain varieties of tinea corporis which formerly were treatment failures by older methods, and griseofulvin relieves these and ringworm of the skin, too. Its a remarkable agent, but I will say that a great many failures of this drug are due to the fact that the clinician had a false diagnosis. Every thickened, fragmented toenail is not necessarily ringworm, and by the same token, every arciform eruption on the trunk is not always ringworm. It would behoove the physician to attempt to find the fungus. He can do it by culture, if he wishes, and he'll soon have an answer. This will prevent the patient from spending a good deal of money for no particular purpose. It is a little embarrassing, I think, to subject someone to three months' treatment of griseofulvin for psoriasis. If the clinician is not well acquainted with ringworm, his cultures will help him improve his diagnostic accuracy.

Dr. Crotty

Dr. Crossland?

Dr. Crossland

My experience with griseofulvin in treating fungus infection of the nails has been contrary to that of Dr. Pinne, and as this is a friendly discussion we give our experience. Dr. J. Walter Wilson who is quite well known in "fungus circles" has said that griseofulvin is very effective for tinea capitis, but the greater the distance from the scalp, the less effective it is. On the toenails I have found it not to be very effective, even if it is given over a period of six or eight months, or a year, and in double-doses — in other words, 500 mg twice a day of the micronized form, real high doses. The changes in the nails are so slow, it hasn't been effective in my experience. It probably has in Dr. Pinne's, maybe there's a difference.

Dr. Kelley

Well, bear in mind too that a good many nail and fungus infections are caused by monilia. Griseofulvin has no effect on that. So it would be useless to give six months' therapy on a monilia infection of the nail.

Dr. Crotty

Cases of *Trichophyton purpureum* infections that responded initially come back after several years, and then there is no response at all. Well, enough about the uses and abuses of griseofulvin.

The next thought that comes to our mind is the one as to whether antibiotics should routinely be incorporated in salves containing corticosteroids? Dr. Kelley?

Dr. Kelley

A few years ago, I would have said yes. Now, I say not necessarily, because we are seeing more and more sensitivity to neomycin which is usually the antibiotic incorporated in the corticosteroid.

Dr. Crotty

Dr. Crossland?

Dr. Crossland

I agree.

Dr. Crotty

Any other comments?

Dr. Crossland

Only this: if you have an infection, treat it with an antibiotic. If you have a skin reaction that isn't infected, why use an antibiotic in the cream? If you know what you are treating, there is no reason to combine the two. I deplore "shotgun" prescriptions.

Dr. Crotty

We should not forget that the best way to sensitize a person to an antibiotic is to apply the agent to the skin or give it via the mucous membranes.

Is it necessary to culture finger infections of the nail? Dr. Crossland?

Dr. Crossland

For the chronic infection of the nail where you have a lot of subungual hyperkeratotic

tissue, the fungus culture should be made from the under surface of the hard nail, not the hyperkeratotic loose material that you find on top of the skin. The fungus seems to grow on the under surface of the hard nail, and there is where you will get your positive KOH preparations and positive cultures. In regard to onychia and paronychia, I find that a great many of these are due to staph. infections, rather than monilia; however, I feel that they should all be cultured.

Dr. Crotty

Dr. Kelley?

Dr. Kelley

I agree.

Dr. Crotty

I think a good, thorough examination of the whole skin is desirable in order to be sure that this patient doesn't have psoriasis somewhere else. Psoriasis is the most common diagnostic error.

We have a question from the audience, and it is also a question that we had in mind. How do you treat itching piles? It is a real practical problem; and also, how do you treat pruritus ani, what do you use? This question: How do you treat pruritus ani when fungus is involved? Would Dr. Kelley like to start the discussion?

Dr. Kelley

I think a lot of that difficulty is from lack of cleanliness. If, after a bowel movement, one can take even plain water on a piece of cotton and clean away any fecal material that might be left, then by local applications of one of the corticosteroids, they usually get considerable amount of relief. X ray could be used in small doses.

Dr. Crotty

Dr. Pinne?

Dr. Pinne

In many instances, I think the existence of the piles is neither here nor there. It is really not the cause of the itching. Actually, a little consideration of the personality of the patient will be very helpful, and if you treat cerebral excitement I think your results of therapy will be greatly improved.

Dr. Crotty

Dr. Crossland?

Dr. Crossland

The fact that the patient has piles indicates that he may have some gastro-intestinal disturbance. Sometimes a lot of these people pass an awful lot of gas by rectum. Consequently, they leak a little bit and this fecal material certainly does irritate the skin.

One other thing that I think is a factor in some cases (and I heartily agree with what Dr. Pinne and Dr. Kelley have said) is condiments. Many of our peppers, horseradish, salami, mustard, ketchup, aren't absorbed in the intestinal tract and remain in the bowel movement, causing an irritation by just passing through the intestinal tract unchanged. I think cleansing is very important.

Dr. Crotty

I don't believe, other than monilial infections which we see following antibiotic therapy, that fungus infection confined to the perianal area is a very common cause of this condition; so we call things fungus that are in the moist areas, but I don't think that many of them are actually fungus infections.

Now, we have a question which is really pertinent. It's regarding the importance of the vehicle in which topical steroids are administered? Dr. Crossland?

Dr. Crossland

I'm afraid that I am talking too much. I prefer the lotions which are the emulsion type in the intertriginous areas and perianal areas, under the breasts, axillae, and sometimes on the face. I prefer them also in the more acute forms of dermatitis. In the chronic, dry and scaly forms, I think the cream is indicated. It rubs in, it vanishes, it is cosmetically acceptable. If the lesions are chronic, lichenified and thickened (and in patches of torpid psoriasis with thick scales) I think then the greasy vehicle is preferable. The pure liquid, which is fluocinalone in propylene glycol, is preferred in atopic dermatitis. It's a new form of treatment about which I'll talk later, but it does rub in, it is very pleasant to use. But as to its effective-



ness in acute dermatitis with itching and burning I think it stings a little too much. In these cases the lotion or emulsion is preferred.

Dr. Crotty

Dr. Kelley?

Dr. Kelley

Also, in the acute phase (when we say acute we don't mean acute by time, we mean acute by what the lesions are, acute erythema, vesicles et cetera) these new aerosol sprays have been a great help. Particularly is this true in acute poison ivy dermatitis. The aerosol corticosteroid spray gives prompt relief.

Dr. Crotty

I think if you change the question around, probably you could exclude the steroids, and the right vehicle at the right time is most important, just as Dr. Kelley said. If you use wet packs at the right time and the cream at the right time, you can use all the expensive steroid ointments in the world and put it on the wrong stage of the eruption and it is not going to do any good. So the vehicle really is the basis of dermatologic care. The right vehicle at the appropriate time. I hope that we have answered that question satisfactorily.

Again, there is always the old question asked about the effectiveness of oral vitamin A in the management of acne. Advertisements and various journals emphasize the theoretical value of vitamin A orally administered in acne.

Would the panelists care to discuss their opinion of vitamin A and acne? Dr. Pinne?

Dr. Pinne

Acne is a most difficult disease in which to estimate treatment, and the reason is that it is constantly getting better or worse through influences which the clinician does not know. There are various things which make the condition worse. One is emotional stress, and another is the disappearance of summer weather and the onset of winter. Now, what is vitamin A going to do for us? Actually, I don't think it is especially ra-

tional. I don't think it has ever been found by any clinician, of my acquaintance at least, that he could really depend on vitamin A to do anything one way or the other in acne. I just don't happen to believe in that preparation.

Dr. Crotty

Dr. Kelley? Dr. Crossland?

Dr. Crossland

I have used vitamin A routinely; I used it for quite a number of years. Now I restrict it entirely to the dry, hard, comedone type of acne. I don't think it does any good in the papular, cystic or pustular type. But, I think if it is given in 50,000 units daily for 21 days a month, it does soften the hard plug comedone and makes it easier to evacuate. But it doesn't have a lot of use in acne.

Dr. Crotty

Many times it works as a placebo. I'm reminded of a patient of mine who came in to see me and she said, "Yes, I'm a lot worse today," she added, "I ran out of my pills two days ago." I looked back at her record, and she had been on vitamin A. So there is some psychological advantage in anything you take orally, I suppose, in these acne cases.

Another prominent, real common problem that we have, and you have, which we hope that we can help you with, is the management of psoriasis of the scalp. Dr. Crossland?

Dr. Crossland

I have very little comment on that. I think generalized ultra-violet light and other supportive measures help psoriasis of the scalp. I have found that in menopausal or postmenopausal women, estrogen therapy in small doses seems to help psoriasis. I don't know why, but it seems to in my patients. One of the things that receives the most acceptance — and sometimes this is the most effective because they'll use it — is this new fluocinalone or Synalar® solution, which is in propylene glycol. They will put it on and rub it in because it isn't greasy and doesn't spoil the hairdo. That is an addi-

tion, but it is still a temporary and topical preparation. Also, I think if they have psoriasis on the scalp, they probably have it some place else. And, helping patients generally, and improving their general health, helps their psoriasis of the scalp, but it is most resistant. If you use Synalar® ointments or creams, a scarf wrapped around the scalp or a shower cap, will hold the cream or ointment on all night long. It makes the head perspire, but the perspiration also softens the scale. Some patients don't like to use it.

Dr. Crotty

Dr. Kelley?

Dr. Kelley

I think, but I can't prove it, that a lot of psoriatics get better on injectible vitamin B-12.

Dr. Crotty

Dr. Pinne?

Dr. Pinne

Many an individual with psoriasis of the scalp, like psoriatics of other types, are in a state of nervous disillusion about something, and if you inquire into what's going on in their lives, and give them appropriate sedation, that often helps a great deal. It is remarkable, by the same token and in reverse, it is possible for a person with psoriatic heredity to develop his disease after some profound mental shock, and do it in a hurry.

Dr. Crotty

I would like to bring to your attention a steroid combination of preparations that was brought to my attention from the Kansas City area. They use 15 per cent Celestone Cream® and put it in distilled water, then they add to it 5 per cent salicylic acid. This is a kind of a simple preparation to make up, it is not expensive, it is easy to use in the scalp, something that we've been using with real good results. Patients like it much better than the tar preparations we've been using. Five per cent salicylic acid, 15 per cent Celestone Cream® in distilled water.

Along this same line, there are a lot of questions on our opinion regarding occlu-

sive dressings, and what complications have we seen from occlusive dressings? I have reference to the Saran Wrap type of dressings used with steroids in the management of psoriasis. Would the panelists care to discuss this? Dr. Pinne?

Dr. Pinne

I suppose the most common side effect from occlusive dressing treatment is the appearance of furunculosis or other smaller staphylococcic lesions. This is perhaps the most unpleasant aspect of it, and frequently comes to those who have overdone the treatment. I never recommend that Saran Wrap be left on anybody's extremities, or anywhere else, 24 hours a day. I ask that they use it at night and take it off in the morning. I think this would go far toward preventing trouble, and also we don't hear complaints about the stench that arises.

Dr. Kelley

I think that as a whole it has been a boon to us. Especially in localized areas. Now, quite obviously it's impossible to take a generalized psoriasis and make an occlusive dressing to cover the whole body — even if it were possible, the retention of sweat, et cetera, would not permit it. But it is very effective in localized areas of psoriasis.

Dr. Crotty

Dr. Crossland?

Dr. Crossland

No further comment, except sometimes there's an overgrowth of monilia or a yeast infection under the Saran Wrap if it is left in place too long.

Dr. Crotty

Would you care to discuss the value of intradermal, intra-lesional, I should say Triamcinolone. Dr. Crossland?

Dr. Crossland

I prefer the Triamcinolone suspension instead of the solution. I think it's more slowly absorbed. Kenalog® if you wish, and diluted one part of the suspension to three parts of distilled water. It's effective in quite low concentrations, that's 2.5 milli-

grams per cc. Use a 30-gauge needle, which is the smallest needle made. It makes the injection less painful. I also use a little Xylocaine® mixed in with the suspension. I think it is effective in small patches that resist other forms of treatment. I wouldn't inject a patch more often than once in two weeks, or at least in the same area. The only thing about it is that it is temporary, and it doesn't cause a true remission of the entire psoriasis. It will help the patch, but recurrences are common following these injections. But, sometimes they are a big benefit.

Dr. Crotty

Dr. Kelley?

Dr. Kelley

If you use the regular strength of Kenalog® that Dr. Crossland was talking about, 10 milligrams per cc., if you use that straight, in practically all cases you will get atrophy. Now this atrophy is supposed to be reversible, but sometimes it takes months and months for it to reverse.

Dr. Crotty

Dr. Pinne?

Dr. Pinne

I've never attempted this method.

Dr. Crotty

I think that one should be particularly careful in the scalp where it's been used for resistant alopecia, there's where the atrophy is really obvious and where it persists more than any other place. Dr. Crossland?

Dr. Crossland

One should be particularly careful of it over the knees and the elbows, because here sometimes you get a reaction with an indurated nodule, and sometimes a sort of a cold abscess.

Dr. Crotty

Here's a real practical question along this line, and you can limit your discussion as much as you want to from the floor. We have this — for what kind of lesion is ultra-violet light therapy of benefit, and is it prac-

tical, and safe, for use by a general practitioner? Anybody care to discuss that for a few minutes?

Dr. Kelley

I use a great deal of ultra-violet. I think it is very effective in tinea versicolor. Bear in mind that tinea versicolor is not affected by griseofulvin. Give them something topically, Pragmatar® or something like that in addition to using ultra-violet light. You will make the skin peel the top layer and take off some of the fungus. I also use it in acne combined with cryotherapy — that is, dry ice in sulfur mixture. Pityriasis rosea, now that is a self-limiting disease, yes, but it continues from six to twelve weeks; with ultra-violet light you can cut down the course of it often as low as two weeks.

Dr. Crotty

Anybody else care to discuss that? Would it be safe and practical for a general practitioner to have an ultra-violet light machine? Dr. Crossland?

Dr. Crossland

I think it would be safe for a general practitioner to have an ultra-violet light. I would suggest this though, that he might try it out on himself first so that he calibrates his machine. One thing should be kept in mind about ultra-violet light, and that is the distance of the lamp to the skin. If you have that distance, one would ordinarily assume that at half the distance you get twice the dose — but you don't, you get four times the dose because it varies inversely as the square of the distance. So, the distance is very important, and it is much better to start with small sub-erythema doses and gradually work up to where you're getting a mild erythema. An intense erythema sometimes will flare in some conditions, even pityriasis rosea or psoriasis. But, it can be used with benefit, and I think it would be of benefit in the family physician's office.

Dr. Crotty

I have one guarded comment: we want to be sure of the diagnosis. Be sure you're not dealing with a photosensitivity disease, such as lupus erythematosus or one of the photo



allergies because you'll certainly do great harm to people with borderline L.E. and that's one real word of caution. If the diagnosis has been confirmed, proceed carefully. Any other comments on this?

Dr. Pinne

Yes, I'd like to make a comment. There are two things that a doctor in an office should remember if he wants to install an office ultra-violet light. The first is to observe the complexion of the patient, they are not all alike. Dark complected people can tolerate light for a long time, and people with red hair, or hair which is verging on that, can't stand much of it. You have to adjust the period of time for your first dose according to the patient's complexion. Don't ever forget to look. The second thing is that perhaps you are not giving this light treatment, you have an office assistant who is doing it. It is well to remind this person that if she hears the telephone ring in the office, she'd better close the louvers on that lamp if she is to answer the phone. Don't let her get caught for a five or ten minute conversation and come back to find the patient who is set for a minute and a half treatment got nine minutes. This kind of a burn, the fault of office personnel, is not well taken by the patient.

Dr. Crotty

A condition that is seen frequently this time of year in our office is the skin condition "pityriasis rosea" — and the question comes to us — would you differentiate pityriasis rosea clinically from ringworm infection? Dr. Pinne?

Dr. Pinne

I think one of the most important points is the history of the condition. Ringworm of the trunk doesn't evolve with such speed. The lesions of pityriasis rosea, when the eruption is commencing to spread, come out at the rate of a dozen or more a day. Ringworm doesn't break out so fast. And, of course, if you really were in doubt, you will find an organism on the lesions of ringworm. No one has ever been able to find one in pityriasis rosea — but they can look remarkably alike.

Dr. Crotty

Dr. Kelley?

Dr. Kelley

I agree with Dr. Pinne, that when you've got the herald spot on pityriasis rosea, remember, as a rule, that it will be present a week or ten days, to two weeks, before you get the generalized eruption, and I agree with George here that a KOH preparation is a must in one of those.

Dr. Crotty

Dr. Crossland?

Dr. Crossland

Even though I'm quite clinically sure that the patient has pityriasis, I do a KOH preparation first because things are not always what they seem. Second, it satisfies the patient because most patients feel that they have ringworm, and if you can truthfully say that you've done a potassium hydroxide preparation and it does not show ringworm, they are much better satisfied. Now, as to other conditions which should be differentiated, and being an old navy man, I have seen florid syphilis, and syphilis secondaries very closely simulate pityriasis rosea. Drug eruptions certainly can simulate pityriasis rosea. Nummular eczema, seborrheic dermatitis, and many other things. But most of these do not have the typical history of pityriasis rosea.

Dr. Crotty

I might add just this about the treatment of pityriasis rosea. I think the less done the better, and it is an important question to differentiate these things, because if they treat them for tinea, usually the asymptomatic pityriasis rosea becomes symptomatic and it is important to make the diagnosis. The less done the better, of course, in these people, and we certainly discourage bathing, and we certainly encourage lubrication, and leaving it alone as much as possible. Any other comments, differences of opinion on therapy of pityriasis rosea?

Dr. Pinne

I would like to call to the attention of the group here, that in children pityriasis rosea attacks the occiput and when it does it has

a marvelous resemblance to ringworm, but, as you might guess, the treatment won't work.

Dr. Crotty

Another common condition that we deal with is bullous eruptions of the hands and feet, and we have a question — would you give a few suggestions of what to look for when we see, say recurrent eruptions, of a vesiculobullous type of the hands and feet? Dr. Kelley?

Dr. Kelley

Of course I think the first thing you should consider is athlete's foot. You are aware that you observe athlete's foot not only as maceration between the toes, and scaling and fissuring, but also as good-sized blisters on the soles. Any type of athlete's foot will give you what we call an *id* on the fingers. These are vesicles along the lateral borders of the fingers where actually there is no fungus present. Actually, all you would have to do would be to treat the feet, when the feet clear, if you wanted to, the hands would go ahead and clear by themselves.

Dr. Crotty

Dr. Crossland? What about contact dermatitis?

Dr. Crossland

Contact dermatitis does not usually occur on the palms and the feet as a vesicular or bullous eruption. However, psoriasis does, and whenever I see a vesicular crusted eruption on the palms and the soles, or either, I look at their elbows and knees, and ask the patient if he has a scaling on his scalp, or in his gluteal cleft. Pustular psoriasis of the palms and soles is a mean, pesky thing to treat. But it does cause pustules. Herpes zoster will cause large bullae on the palms. Infectious eczematoid dermatitis, a bacterial infection causing pustules, blebs, et cetera, will do that. In contact dermatitis the only thing that makes it is not a true sensitivity, but a chemical burn such as those due to various irritating substances, not truly allergic.

Dr. Crotty

The staph problem remains refractory,

what can we add as dermatologists? What can we suggest to practitioners who have patients that have resistant staphylococcal problems of the skin, furunculosis, folliculitis, et cetera?

Dr. Pinne

In many cases a chronic infection of this type is closely related with the victim's occupation. He may work under conditions where he can't keep clean and, actually, you're stymied. If he doesn't change his employment, he is likely to stay in trouble indefinitely. This is perhaps one of the most common reasons for an endless series of boils. Another thing, we mustn't forget that we are doctors on general principles, not just doctors of the skin. Many an uncontrolled diabetic gets into trouble with infections of this type, and if you don't consider diabetes, whatever you put on the skin isn't going to help very much. You have to think of the person as a whole, and each such person deserves a urinalysis. You may find that there is pus in the urine, and that the patient is inoculating himself. That's enough to cause a treatment failure, if you think only of local applications for furunculosis.

Dr. Crotty

Dr. Kelley?

Dr. Kelley

For real stubborn cases, you can still always think about the old autogenous vaccine.

Dr. Crotty

Dr. Crossland?

Dr. Crossland

I think culture sensitivity tests are important, but they are only laboratory tests. Broad spectrum antibiotics, or the staphcillins may be used. In chronic and recurrent cases, I like to use them over quite a period of time, but not in high doses. High doses at first, then gradually decreasing to maybe one 250 milligram capsule of a broad spectrum antibiotic daily for two, three, or four weeks. I believe in cleansing the skin with an antiseptic detergent, my favorite is pHisoHex. I agree that investigating the

general health, there must be some reason for these people to get recurrent boils and furuncles, so their general health certainly should be considered.

Dr. Crotty

One final question we have is from the floor regarding therapy of acne. Is there a place for hormonal therapy in the female and the male? Dr. Pinne?

Dr. Pinne

As soon as you start to use hormones in the treatment of acne, you are going to have to be an ardent student of all kinds of endocrine disorders, above and beyond acne. I don't care for this method.

Dr. Kelley

I never use it except in topical form, Acnestrol® in a lotion which goes on the skin, and does not have any absorption to interfere with other hormone imbalance.

Dr. Crotty

Dr. Crossland?

Dr. Crossland

I seldom use hormone therapy in acne. I used to use estrogens during the last part of the cycle to prevent premenstrual flares. I've stopped doing that because I don't believe it did any good. One of your dermatologists here in Nebraska, Dr. Dudley Bell of Lincoln, carried out a project on Enovid®, if we may use a trade name, which was given to people with persistent, or bad acne, and particularly those who flared. If I remember correctly about 42 of 65 were improved. This doesn't work in every case by any means. But in some of those who have a premenstrual flare, and a rather deep-seated cystic acne, it does help. Acne is a simple disease, it may produce scarring and bad results, but I hate to see the hormone imbalance of these young people disturbed, or in any way tampered with unless it is absolutely necessary.

Dr. Crotty

With this our time is up, and we thank you for your cooperation. We hope that we have answered some of your questions. I thank the panelists, and I particularly thank Dr. Crossland for being with us here today.

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#### A BIT OF EDWIN DAVIS' VERSE

As each one must experience to learn—  
Worth more than wealth, by wit or toil attained  
A greater boon than fame, for which all yearn,  
Is precious health, revalued since regained.

—Edwin Davis, MD

(From Bishop Clarkson Memorial Hospital News, March, 1965).



# Response of Malignancy to Phenylalanine Restriction

## A Preliminary Report on a New Concept of Managing Malignant Disease\*

**C**ONCENTRATIONS of free amino acids within the cells of various tissues differ from each other and from that in the plasma. Most cells have a limited ability to synthesize amino acids and all cells need to derive their "essential" amino acids from an external source. Therefore, the transport of amino acids from the extracellular fluid is undoubtedly the most important factor controlling cell free amino acid levels. One of the functions of hormones could be to alter the availability of amino acids.<sup>1</sup> The evidence indicates that the hormones that promote growth in tissues increase the transport of amino acids into those same tissues.<sup>2</sup> Christensen<sup>3</sup> in 1948 suggested that the growth of a cell might be regulated by the rate at which it concentrated amino acids. Hormones may favor the growth of one tissue over that of another by increasing the ability of the target cells to concentrate their required amino acids<sup>4</sup> or by altering the amino acid concentrations of the plasma.

In either case, the end result is the provision of increased substrate for protein synthesis. Comprehensive observations on the free amino acid content of human female reproductive tissues and the increase of amino acids in the uterus following estrogen and progesterone treatment have recently been reported.<sup>5, 6</sup>

**Amino Acids in Tumors** — In any cell population undergoing rapid division and growth, the cells require an increased supply of amino acids for synthesis of the necessary cellular proteins. The amino acid levels of malignant tumors have been reported by Roberts and Simonsen<sup>7</sup> using paper chromatography, and by Ryan and Lorincz<sup>8</sup> using column chromatography. In the latter studies all of the tumors examined had con-

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centrations of amino acids increased 1.3 to 11 times the levels found in the surrounding histologically normal tissues. Variations in the amino acid pools of malignant tumors were found to be as pronounced as are the variations among normal tissues. However, in any one individual, geographically separate tumors, free of normal and necrotic tissues, showed remarkable similarity in amino acid patterns.

A frequent manifestation of malignant disease is the production of catabolism in the host while anabolism occurs in the tumor. Rapidly growing malignant cells, because of their greater ability to concentrate and utilize amino acids, cause catabolism and amino acid imbalance in adjacent cells. This fact permits two possible approaches to cancer therapy. First, it might be feasible to reduce the catabolism of the normal tissues by supplying the malignancy with the amino acids it requires. Such treatment would enable the malignancy to be attacked by known effective methods. By maintaining nitrogen balance and normal tissue function, the hazards of treating the malignancy would be decreased and natural host resistance would undoubtedly be enhanced. The second therapeutic approach to the control of malignancy would be the attempt to inhibit cell growth by inhibiting protein synthesis. The basic drawback common to the use of carcinostatic agents toward this end

\*This study was supported in part by a grant from the Nebraska Division of the American Cancer Society and Public Health Service research grant HD-01180.

such as amino acid analogues, antivitamins, and antagonists to purines and pyrimidines is the parallelism that exists between carcinostasis and cytotoxicity.

**Limiting Essential Amino Acids** — Considering that proteins cannot be manufactured if an essential amino acid is lacking in the diet, a limiting essential amino acid dietary attack was proposed with the governing idea being to inhibit protein synthesis in order to slow malignant growth. A diet lacking a single essential amino acid would not display any secondary toxic effects on the various biochemical systems. Whereas the body or a malignant tumor could metabolize, detoxify, excrete, or otherwise develop immunity to an introduced chemical agent, there is no possibility of adaption to a total or near total deficiency. Also, since many antagonists operate at the enzymatic level as competitive inhibitors, when utilization of the normal substrate is retarded, its concentration builds up and eventually overcomes the inhibition. This can not occur with dietary restriction.

Preliminary animal experiments evaluating the effects of limiting amino acids on malignant tumors have been reported.<sup>9, 10</sup> Phenylalanine and lysine deficient diets were found to inhibit the growth of hepatoma and mammary adenocarcinoma in mice. Ryan<sup>11</sup> has shown that a low phenylalanine diet can maintain weight, hemoglobin, and plasma proteins of such mice while it significantly inhibited their tumor growth. Based on these considerations, Lofenalac,\* a commercially available low phenylalanine food hydrolyzate prepared from casein, was utilized in the treatment of malignant diseases.

**Phenylalanine Restricted Diet** — The daily minimum requirement for phenylalanine for the human adult female is estimated to be 420-620 mg/day. With adequate tyrosine (0.9 gm/day) in the diet, the phenylalanine requirement decreases to 120-220 mg/day. Tyrosine exerts a "sparing" effect in that less phenylalanine is needed for conversion to tyrosine for protein, catecholamine, and other syntheses. Lofenalac by itself provides adequate amounts of tyrosine. The

phenylalanine content of Lofenalac varies from 0.06-0.1 per cent, and it was calculated that 225 gm of Lofenalac daily would provide approximately 135-225 mg of phenylalanine and 1.4 gm of tyrosine per day.

Patients were maintained on strict diets with limited supplements of certain fruits, vegetables, cereals, fats, and carbohydrates which added little phenylalanine so that the total amount remained limiting with regard to the other essential amino acids. The calculated 24 hour intake averaged 6.1 gm nitrogen, 215.1 gm carbohydrate, 54.5 gm fat, 38.5 gm protein, which supplied 1499 calories and 405 mg of phenylalanine.

This dietary regimen was strictly adhered to for 28 days after which a re-alimentation period of three to five weeks duration with unrestricted food intake was permitted. The dietary regimen was then reinstituted for another 28 day period. Control and periodic blood samples and tissue specimens when possible were obtained for analysis. Sera and tissues were analyzed for free amino acids using the Spinco Amino Acid Analyzer as described by Spackman.<sup>12</sup> Alternating low phenylalanine dietary restriction and re-alimentation periods have been maintained on all patients studied. The results in three treated patients out of a total of five patients started on this regimen are reported. The unreported cases have completed less than two periods of phenylalanine restriction to date.

It should be noted that while amino acids tended to fluctuate between intervals of sampling in the three reported patients, phenylalanine and tyrosine showed either a fairly consistent downward trend or remained at low levels when other amino acids showed pronounced upward trends. The amino acid data is presented only for Case 1, since it was typical of the findings in the other cases.

### Report of Cases

**Case 1** — A 55-year-old woman, Gravida V Para III had onset of vulvar itching nine months before clinical examination and she was aware of a rapidly enlarging tumor mass on the

\*Lofenalac was supplied by Mead Johnson Laboratories



perineum for at least two months. Weight was 106 lbs. (48.1 kg) and blood pressure was 210/110. The left labium minus pudendi in its upper half contained a 3x2x1 cm hard reddish blue-black tumor (Fig. 1). There were no palpable regional nodes, and the internal pelvic organs were consistent with her parity and age. Other physical findings were within normal limits. Gynecology and pathology consultants were of the opinion that the gross lesion represented vulvar malignancy with secondary hemorrhage that accounted for the discoloration. Wide local biopsy excision was advised. On Sept. 15, 1964, the lesion with surrounding tissues, measuring 6x3x2 cm, was excised. Histological examination revealed a diffuse infiltrating malignant melanoma with perineural lymphatic invasion and deep seat-

ed foci of neoplastic cells (Fig. 2). A deep focus of malignant cells was cut through at the clitoral margin of the specimen and it was apparent that not all malignant cells were removed.

Within a week, disruption and non-healing of the biopsy site was evident; there was a necrotic-appearing base and bilateral inguinal nodes were palpable. Within ten days a repeat chest roentgenogram with planogram views disclosed a parenchymal lesion at the apex of the heart interpreted as consistent with metastasis (Fig. 3). In view of such rapidly adverse changes, the prognosis was extremely poor, and there were differences of opinion as to further management.

One month later, the patient's condition remained essentially unchanged. Slight drainage continued from the non-healing biopsy site and multiple, hard



Figure 1. Malignant melanoma of the left labium minus pudendi (Case 1).

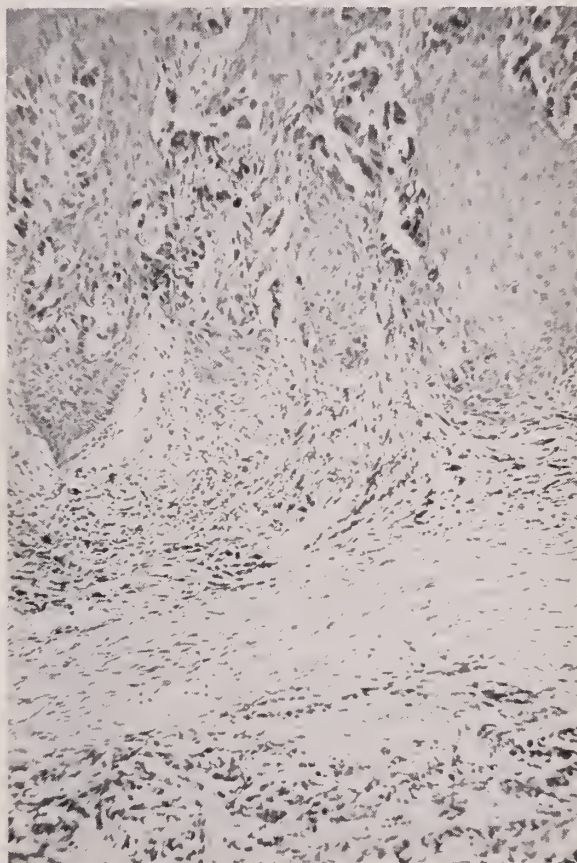


Figure 2. Photomicrograph of malignant melanoma of the vulva (Case 1) with perineural lymphatic invasion (Hematoxylin and Eosin, x110).





Figure 3. Roentgenograph (planogram) of lung lesion at cardiac border suggestive of metastasis (Case 1).

nontender inguinal nodes between 0.5 to 1.5 cm in size were palpable bilaterally. There was no febrile reaction, however, and the patient's general condition appeared poor.

The experimental management by limiting phenylalanine was proposed to the patient. Metabolic studies and amino acid analyses were made under hospital metabolic ward conditions. Table 1 represents the individual amino acid changes that occurred in the plasma and the average nitrogen balance.

By the beginning of the third week of the phenylalanine limited diet, the vulvar lesion had healed completely, and the inguinal nodes markedly decreased in size and numbers. Two palpable nodes in the left groin and one in the right remained. The patient's general physical improvement was most striking. After three weeks of dietary therapy, the clitoral site known to have retained malignant cells was rebiopsied with excision of a specimen measuring 3x0.5x1 cm. Histological examination did not reveal any evidence of melanoma cells in this specimen and the site of the second biopsy healed promptly. Roentgenogram of the lungs two months later

revealed only a small pericardial adhesion remaining along the left lower heart border.

The patient has maintained good health and well-being to date. Table 2 summarizes the clinical response to this management. Repeated courses of low phenylalanine intake have been maintained periodically, even though there was no suggestion of recurrent tumor at any time. Her weight on May 29 was 113 lbs. (51.3 kg), and her blood pressure remained stabilized at approximately 140/80.

Case 2 — This 52-year-old woman was diagnosed as having Hodgkin's disease in January 1958 from biopsies of lymph nodes found in the left anterior cervical lymphatic glands. At that time she weighed 149 lbs. (67.7 kg), and her hemoglobin was 13 gm/100 ml; the WBC was 9,400 per cubic mm with a normal differential count, and the RBC was 3.8 million per cubic mm. Glands were also palpable in the left axilla, but there was no splenic or hepatic enlargement. The patient was intensively and exhaustively treated by irradiation and oncolytic drugs since that time. Initial treatment consisted of deep

Table 1

SERUM AMINO ACIDS (uM/ml) AND NITROGEN (gm/24 hr.)  
DATA ON LIMITED PHENYLALANINE INTAKE (CASE 1)

| AMINO ACIDS           | Control | 5th Day | 11th Day | 22nd Day |
|-----------------------|---------|---------|----------|----------|
| Taurine               | .087    | .098    | .132     | .095     |
| Urea                  | 3.000   | 1.970   | 2.090    | 1.590    |
| Aspartic Acid         | .021    | .018    | .030     | .021     |
| Threonine             | .081    | .103    | .103     | .106     |
| Serine                | .078    | .088    | .102     | .085     |
| Glutamine-Asparagine  | .367    | .413    | .408     | .400     |
| Proline               | .246    | .194    | .247     | .218     |
| Glutamic Acid         | .108    | .081    | .188     | .109     |
| Citrulline            | .038    | .031    | .021     | .026     |
| Glycine               | .189    | .201    | .218     | .233     |
| Alanine               | .244    | .295    | .397     | .311     |
| a-Amino-n-butric Acid | .019    | .011    | .012     | .009     |
| Valine                | .138    | .131    | .193     | .130     |
| Methionine            | .014    | .018    | .030     | .020     |
| Isoleucine            | .041    | .034    | .044     | .039     |
| Leucine               | .084    | .065    | .094     | .059     |
| Tyrosine              | .029    | .017    | .034     | .018     |
| Phenylalanine         | .043    | .040    | .033     | .032     |
| Ornithine             | .080    | .053    | .075     | .046     |
| Ammonia               | .389    | .381    | .369     | .294     |
| Lysine                | .121    | .113    | .152     | .103     |
| Histidine             | .059    | .042    | .054     | .042     |
| Arginine              | .055    | ---     | .035     | .050     |
| Nitrogen Intake       | ---     | 7.02    | 7.02     | 7.02     |
| Urinary Nitrogen      | ---     | 4.70    | 3.81     | 5.00     |
| Stool Nitrogen        | ---     | 1.05    | 0.95     | 0.81     |
| Balance               | ---     | +1.25   | +2.25    | +1.19    |

Table 2

CLINICAL RESPONSE TO PERIODS OF LIMITED  
PHENYLALANINE INTAKE (CASE 1)

|             | Initial<br>(Oct. 64) | First<br>(Nov. 64) | Second<br>(Jan. 65) | Third<br>(Mar. 65) | Fourth<br>(May 65) |
|-------------|----------------------|--------------------|---------------------|--------------------|--------------------|
| Weight (kg) | 48.30                | 49.75              | 51.59               | 53.63              | 51.60              |
| B.P.        | 210/110              | 132/80             | 130/80              | 136/84             | 134/80             |
| Hgb         | 13.6                 | 11.5               | 13.7                | 13.9               | 14.3               |
| Hct         | 40%                  | 35%                | 40%                 | 40%                | 43%                |
| WBC         | 10,550               | 7,700              | 6,150               | 6,400              | 8,700              |

X-ray therapy to the involved gland areas, and such irradiation was repeated to tolerance as diseased glands became apparent. With exacerbations of the disease process, courses of nitrogen mustard and vinblastine sulfate therapy were administered periodically over the next five years. The most disabling complications that had occurred were extensive tumor involvement of the spinal vertebrae with complete destruction of T-10 and T-11 and marked involvement of T-12 and L-1, massive involvement of the pelvic lymph glands

and the hilar regions of the lungs. In December, 1962, the weight was 129 lb (58.6 kg), and anemia was so marked that blood transfusions were instituted. Over the course of the next three years, the patient experienced severe bouts of fever, malaise, and anorexia, and the weight loss and anemia were progressive. Therapy consisted of multiple repeated transfusions, protamide for pain, courses of oncolytic drugs which additionally included chlorambucil (Leukeran) plus massive doses of corticosteroid (Prednisone).

Despite these measures, the clinical course was one of continuing deterioration so that prior to initiation of the dietary regimen in December, 1964, the patient's condition was grave and unresponsive to all forms of conventional therapy. The patient had her last blood transfusion one month before, and she commenced her seventh known year of the disease.

During dietary management the massive doses of chlorambucil and Prednisone were maintained in the hope of not losing any possible benefits from these drugs. Improvement in the patient's general condition gradually occurred and has continued with maintained periodic phenylalanine restriction and re-alimentation. Table 3 demonstrates the clinical response to treatment. For the first time in five years the patient evidenced gain in weight. Also, she achieved ambulation outside of her home with the aid of back braces, and the hemogram improved without transfusion for the first time. Her general feeling of well-being amazed all who knew her, and her attending physician reported a definite decrease in bulk of the enlarged diseased pelvic nodes.

Case 3 — This 73-year-old woman had a total hysterectomy and bilateral salpingo-oophorectomy in 1962 after a 15-year postmenopausal onset of bleeding. The malignancy found was a squamous carcinoma originating in a large submucosal polypoid endometrial adenoma within the uterine cavity. Eight months subsequent to surgery a recurrence in the vaginal vault was proved. Direct and deep cobalt irradiation therapy was given to maximum tol-

erance. The spread of the malignant process, however, continued. By mid-November of 1964 the patient had complained of dysuria and watery vaginal discharge, which was due to the development of a trophic vesico-vaginal fistula. This and subsequent bouts of urinary tract infections were controlled with antibiotics. At this time daily progestin therapy, Enovid 10 gm orally and Delalutin 500 mg I.M., was initiated. At two week intervals the Enovid dosage was increased up to a daily maintenance dose of 40 mg which was then continuously maintained since mid-January of 1965. The vaginal tissue became succulent, but there was no evidence of regression of the tumor masses. Prior to initiation of the restricted phenylalanine therapy, the diagnosis was Stage IV pelvic carcinoma with multiple massive tumors involving the pelvis and lower third of the abdomen. Multiple tumors from 0.5 to 3 cm in diameter were found in the vagina, and were invading the bladder and bowel walls. The patient evidenced a continuously deteriorating clinical course with weight loss, progressive weakness, anemia, and complaints of pelvic pain, urinary discomfort and leakage, and irregular bloody vaginal discharge.

Under these circumstances on February 22, 1965, the limiting phenylalanine regimen was instituted on an outpatient basis. A representative photomicrograph of the metastatic vaginal tumors is shown in Fig. 4. Table 4 demonstrates the clinical response during three months of management. About ten days after completing the second month of

Table 3  
CLINICAL RESPONSE TO PERIODS OF LIMITED  
PHENYLALANINE INTAKE (CASE 2)

|                   | Initial<br>(Dec. 64) | First<br>(Feb. 65) | Second<br>(Apr. 65) | Third)<br>(June 65) |
|-------------------|----------------------|--------------------|---------------------|---------------------|
| Weight (kg)-----  | 44.00                | 45.45              | 47.28               | 49.10               |
| Hgb-----          | 9.0 gm               | 8.0 gm             | 8.7 gm              | 8.8 gm              |
| RBC-----          | 4.2                  | 2.9                | 3.7                 | ---                 |
| WBC-----          | 9,400                | 8,600              | 9,700               | 5,300               |
| Differential----- | P L M E              | P L M E            | P L M E             | P L M E             |
|                   | 94 3 2 3             | 83 8 8 1           | 75 20 3 2           | 90 4 5 1            |



Table 4  
CLINICAL RESPONSE TO PERIODS OF LIMITED  
PHENYLALANINE INTAKE (CASE 3)

|                   | Initial<br>(Feb. 65) | First<br>(Mar. 65) | Second<br>(May 65) |
|-------------------|----------------------|--------------------|--------------------|
| Weight (kg)-----  | 66.36                | 67.27              | 72.72              |
| B.P.-----         | 200/110              | 176/86             | 180/90             |
| Hgb (gm.)-----    | 12.6                 | 12.4               | 12.6               |
| Hct-----          | 37%                  | 36%                | 37%                |
| WBC-----          | 11,300               | 7,700              | 4,900              |
| Differential----- | ---                  | P S L M E          | P S L M E          |
|                   |                      | 77 4 16 1 2        | 78 12 10 0 0       |

restricted phenylalanine intake, the patient developed an acute episode of her recurring urinary tract infection. The infection apparently aggravated her cardiac status and necessitated hospitalization. Within 48 hours, despite digitalization, hydrocortisone, and supportive measures, the patient developed cardiac decompensation with failure and expired.

Postmortem findings were those of marked arteriosclerotic heart disease, pulmonary atelectasis, bilateral hydro-nephrosis, acute pyelonephritis, radiation cystitis with a 3.5 cm vesico-vaginal fistula, radiation proctitis, and pelvic obliteration by adhesions and tumor

nodules surrounding the right ureter. On her last admission laboratory studies disclosed the following values: urea nitrogen, serum, 18 mg/100 ml; sodium, serum, 136 mEq/l; chlorides, serum, 96 mEq/l; potassium, serum, 2.5 mEq/l, and carbon dioxide combining power, serum, 19 mEq/l.

This patient evidenced weight gain and gradual subjective improvement in general well being until the terminal episode of her acute urinary tract infection eventuating in cardiac failure. At autopsy, particular note was made of the evident regression of the metastatic carcinoma that involved the lower pelvis, and of the fact that the mass



Figure 4. Vaginal metastasis of squamous carcinoma (Case 3) originating in a submucosal adenoma of the uterine endometrium (Hematoxylin and Eosin, x110).

obliterating the upper pelvis consisted principally of fibrous adhesions. Thus, in this case there was objective improvement in the extent of involvement by the malignant process. The conventional therapies for pelvic malignancy ultimately contributed to the recurring urinary tract infections and the terminal cardiac decompensation in this elderly patient.

### Comment

If there is to be a successful biochemical therapeutic attack on malignancies, it appears logical that this attack should focus on the inhibition of malignant cell growth by inhibiting protein synthesis. Without new protein there cannot be new protoplasm for cell division. It is also obvious that proteins cannot be manufactured if an essential amino acid is lacking in the diet.

A dietary approach, wherein the diet is deficient in a single essential amino acid, seemed sufficiently worthwhile to subject the theory to experimental and clinical study. After considerable experimentation with various limiting amino acid diets in animals, it was found that a phenylalanine deficient diet could maintain the weight, hemoglobin, and plasma proteins of tumor-bearing mice and cause significant inhibition of tumor growth. It was possible to establish the minimal requirement for this essential amino acid so as to cause decrease in tumor growth yet maintain the host.

The commercial availability of a low phenylalanine diet, ordinarily used in the treatment of phenylketonuria, enabled the clinical evaluation of a restricted phenylalanine intake in adult humans with malignant disease. The initial results in the case of metastatic vulvar malignant melanoma, severe chronic Hodgkin's disease, and advanced pelvic squamous carcinoma were so much better than was anticipated that these cases are reported. Experimental work on the amino acid patterns of various human malignancies and on the effects that certain steroid hormones have on the amino acid patterns of hormone-responsive tissues encourage furthering knowledge of the specific amino acid requirements of tumors and other

rapidly growing tissues for protein synthesis. It is conceivable that selective starvation reduces the potential of malignant cells to compete on equal terms with normal cells. The more versatile malignant cells may be capable of adapting to the presence of chemical inhibitors perhaps by forming more enzyme or by increased detoxification, but when protein synthesis is interfered with because of deficiency, the malignant cell's versatility and greater metabolism offer no protection and may actually be a detriment. Cycles of selective starvation and re-alimentation thus may form the basis of a new therapeutic approach to malignant disease. It is emphasized again that the great advantage of this approach is that normal biochemical systems are not damaged or inhibited by a toxic carcinostatic agent, and that no adaptation can occur to the deficiency.

### Summary

The minimal requirement for phenylalanine to inhibit malignant disease, yet maintain a condition of well-being, was given therapeutic trial in advanced metastatic cases of malignant disease. Of the initial five cases, only three patients had been followed for at least four months. The diagnoses were malignant melanoma, Hodgkin's disease, and squamous carcinoma of the pelvis.

The clinical management and response of these cases is reported. The theoretic and experimental basis for cyclic selective starvation through limiting the intake of an essential amino acid, phenylalanine, and re-alimentation regimens are presented as a therapeutic consideration in the control of malignant disease.

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"It is estimated that more than 20 million children under age 10 in the United States are still unprotected against measles . . .

"The common belief that measles is nothing more than a childhood nuisance is completely false . . ." (From recent News Release from Pitman-Moore Company).



## "Nonparticipation" And The Sherman Act

**D**OCTOR Montgomery, Members of the Reference Committee and Members of the House:

I was told to confine these remarks to not more than 20 minutes, which is a difficult task when discussing the antitrust laws. However, I am going to do so, or nearly do so, by omitting quotations from statutes and cases, and by omitting any reference to particular sections of the Medicare Act. I shall call Part One of the Medicare Act, the Medicare Act, and for simplicity, I shall call the program provided under Part One, the Medicare Program.

I do want to emphasize at the outset that I am discussing only the law and legal problems. I am not in any way discussing any question of policy, which is, of course, a matter for your decision. Such conclusions as I shall make, I have discussed with my partners and associates — a great number of them — who are very experienced in these fields. The conclusions I will give you are the conclusions of everyone in our firm, and others as well, with whom I have discussed this subject, and not only mine or those of my partner, Karl Nygren, who works closely with many of you.

Some reference is made in one of the resolutions I noted — I have not seen the resolutions, but I heard some of them read — to Constitutional Rights. Before turning to the Sherman Act, let me make this clear, and I am sure you all know it, there are many actions which this Association can take that are perfectly lawful.

For example, you can continue your fight on the Medicare Program by passing resolutions authorizing the officers, the Board, and all segments of medicine to try and induce the public to repeal the Medicare Act, to modify the Act where deemed necessary in your interest, and to stop any further expansion of this social program by government. There is not any question about your right to do so. You can instruct your Board of Trustees and officers to try — as apparently according to the discussions this

Remarks of Leslie Hodson, Esq.\*  
Before the AMA House of Delegates  
Special Convention, October 2, 1965  
Chicago, Illinois

morning, they are doing — to induce the Department of Health, Education and Welfare to adopt and promulgate regulations that meet the philosophy of the profession in so far as permissible under the Act.

You can certainly disseminate objective information, all kinds of information, concerning the Act, and how it operates, and concerning the regulations and the administration of the Act, so that the members of the profession will be enabled to exercise an independent, but informed, judgment. You can criticize the administration of this Act.

All these rights, and others as well, are protected by the First Amendment which states that Congress shall pass no law abridging freedom of speech. However, the protection of the First Amendment does not extend to conduct which violates other valid federal statutes including the Sherman Act. That brings me to my subject this morning.

I think the best way to illustrate the principles of the Sherman Act which are applicable to activities of organized medicine, or physicians, in connection with the Medicare Program is to assume that there is presented to you this morning a simple, forthright resolution:

"RESOLVED by this House of Delegates that we recommend to the physicians of this country that they refuse to participate in the Medicare Program."

In our opinion, and I may say in our unqualified opinion, if that resolution were adopted by the House, it would constitute a violation of the Sherman Act. We reached that conclusion by considering three ele-

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ments that constitute a violation of the Act. Although this will take a little time, Mr. Chairman, I think it is necessary for me to explain those three elements.

The first element is that there must be concerted action, that is, there must be group action to constitute a violation of Section 1 of the Sherman Act. I say to you that any physician acting independently — not in concert with others; not as group action — may participate or not participate in the Medicare Program for any reason he wishes. If, however, there is group action, that raises a different problem. Obviously this resolution, if adopted by the House of Delegates, would constitute group action because the members of the House, as a group, would be agreeing to this resolution. Moreover, since this House is the highest policy-making body of medicine, the resolution would constitute the act of AMA, and constituting the act of AMA, it would then constitute a concert of action between AMA and those physicians who thereafter refused to participate in this program because of that recommendation of this House.

As I have said, a physician acting independently does not come within the Sherman Act. The Act does not proscribe that type of individual action.

I do want to point out one practical problem, however: if this House were to pass this assumed resolution, and physicians thereafter would decide not to participate in the plan, then in any action in court, either AMA or those physicians would have a very difficult time convincing any Court or jury that the recommendation passed by this House was not the reason for their nonparticipation. So much for concerted action, the first requirement.

The second requirement is that the concerted action result in a restraint — a restraint on interstate trade and commerce. I am here discussing the nature and meaning of the word “restraint,” and not “interstate trade or commerce” which I will discuss in a few minutes.

The courts have used various standards of measurement to determine whether a par-

ticular restraint, as a result of concerted action is legal or illegal. I may say to you that to make those various standards of measurements understandable to a layman to the law would require about an hour because we would have to review court decisions, what the facts were in those cases, and why a particular standard of measurement was used in each of those cases. I think that type of legal review is unnecessary today because, in our judgment, no matter what standard of measurement would be used, the joint action of this House in recommending nonparticipation would be illegal under any of those tests.

The question would be: What is the purpose, and what is the effect of this resolution? We are certain what a court today would hold concerning this resolution, which stated again is:

“RESOLVED by this House that we recommend to the physicians of this country that they refuse to participate in the Medicare Program.”

A court would say that the sole purpose of that resolution was to boycott the Medicare Program, and thereby frustrate its operation.

A court would assume, because of the high respect with which this highest policy-making body of medicine is accorded, and properly accorded, that a substantial number of physicians would follow that recommendation. The impact of that recommendation, the court would hold, would be a substantial restraint on the operation of the Medicare Program in view of the importance of the physicians' services to this program.

We, therefore, believe such a resolution would be illegal.

A suggestion has been made that the illegality can be cured if we add to that resolution a proviso — a proviso which says in substance:

“Provided, however, that no coercion or penalty is threatened or will be threatened, to influence physicians in making their decision as



to whether or not they will participate."

In our opinion that proviso would not make the resolution legal. In the first place, since the purpose of the resolution is clear, the question is one of the impact on the plan. It seems to us to make no difference whether physicians by concerted action refuse to participate in the Medicare Program because of the recommendation, or whether they refuse to participate because of the recommendation plus some pressure exerted on them. The impact on the plan is the same in both cases.

Moreover, we have to be realistic here, gentlemen. It seems to me that the proviso ignores human nature. You have been opposing the enactment of this program or similar programs for many years, and, as various resolutions and the President's report stated this morning, you are going to continue to do so. I am convinced of that.

There are approximately 290,000 physicians in this country. There are many state and county medical societies, and other medical groups. It just ignores human nature, in view of this history and structure, to believe that no group or organization is going to use some form of concerted pressure on physicians not to participate in this program. Somewhere in the nation this is going to happen, and then the suggested proviso will become a nullity because the court will hold that this pressure action was foreseeable and that you had knowledge that some pressure could be expected.

I must now make a few comments which are extremely distasteful to me. We hold other members of our profession in the same high esteem as your members hold each other in your profession. We have honest differences of opinion among us, as you do, but I think it is unseemly that those differences must be aired in public. Nevertheless, as your attorney advising you in these matters, I find myself faced with a situation in which I must do just that, because many of you have had opinions from other law firms and counsel dealing with this subject. As AMA's attorney I must say to you that I wholeheartedly disagree with any conclu-

sion in those opinions that AMA can pass the type of resolution I have been discussing, or any similar type, that AMA may recommend to its members that they refuse to participate in this program, provided coercion is not used to influence the members' judgment.

Moreover, it does not matter, of course, whether the word in the resolution is "recommend," or whether it is "urge" or whether it is "advocate," or whether it is "advise." Any of those, or similar words, in a resolution, that import an invitation to a boycott will, in our judgment, be held a violation of Section 1 of the Sherman Act.

I must spend a few minutes — and I apologize for using the time, Mr. Chairman — on the question of interstate commerce.

We had assumed, in view of the scope of this Act, that no one reading the Act would think that there were any serious questions that the Medicare Program will involve interstate trade and commerce. However, in some of these opinions, without passing on the question, the statement is made that this presents a very serious question.

Let us consider this Medicare Act for a moment, without referring to particular sections. You all know that it provides a comprehensive, nation-wide program in which, as an integral part of that program, hospitals, health care facilities of various sorts, insurance carriers, prepaid health plans, presumably including Blue Shield and other instrumentalities, and physicians, will participate, and each will be an integral part of this program.

It seems to us there is no question that most of these instrumentalities, excluding physicians for the moment, are engaged in trade and commerce.

The Supreme Court in an antitrust case has held that insurance carriers are engaged in trade. The Supreme Court, in a case which we should not forget, has held that a prepaid health plan — a cooperative plan conducted by a not-for-profit corporation for the benefit of its members — was engaged in trade. That also was an antitrust case. Courts under other statutes have held hos-



pitals engaged in trade. We, therefore, have a situation in which a great many of the instrumentalities, which are an integral part of the Medicare Program, will be engaged in trade and commerce.

What about interstate trade? Again let us consider these few salient facts. Enrollees in the Medicare Program will pay, either actually or constructively, premiums to the Secretary of Health, Education and Welfare in Washington. Those enrollees will reside, in many, if not all states of the Union, and those premiums actually or constructively will flow across state lines. The Secretary will enter into contracts with hospitals, insurance carriers, and other instrumentalities, likewise located across the country. In the negotiation of those contracts and in the performance of them, there will be many transactions which transcend state lines.

Finally, the payment of benefits under the plan will be made to providers of services or insurance carriers or to some other body acting as an intermediary for the providers of services, and those intermediaries in turn, will pay the benefits to the hospitals, to the other instrumentalities and to those physicians who accept assignments.

Can anybody possibly contend, in view of these facts, that this present Supreme Court would not hold that this Medicare Program involves interstate commerce? I just cannot believe it.

At this point I would like to answer two questions that are asked many times by physicians and sometimes by lawyers. The first question — and it is a natural question — is this: How can we physicians who practice a profession, and who are not engaged in commerce, violate the Sherman Act which is concerned only with trade and commerce?

The Supreme Court decided that issue, you will recall, in the old AMA case. In that case that issue was raised and was presented thoroughly by AMA's attorneys at that time. The Supreme Court held that a decision on that point was immaterial. It was unnecessary to decide the nature of the occupation of physicians because whatever

that nature was, if their activities restrained trade, there would be a violation of the Sherman Act. So the fact, if it is a fact, — for the issue is not completely settled yet — that physicians are engaged in a profession and not in trade, does not preclude them from violating the Sherman Act.

A second question which is asked, and which also was raised in one of the resolutions I heard this morning is: How can we, as physicians, with perhaps some of these other instrumentalities which are engaged entirely in local commerce, violate the Sherman Act which deals with interstate commerce? In many cases the Supreme Court has held that an enterprise or a group which imposes a concerted restraint, even though its activities are entirely local, is not saved from prosecution, and liability, if the effect of the activities is to interfere with interstate commerce.

Mr. Justice Jackson, in one case, made one of his very pointed remarks on this subject. He said that if it is interstate commerce which feels the pinch, it does not matter how local the operation which applies the squeeze.

Additionally, the issue is not whether interstate commerce is involved in a restraint on one local hospital or one prepaid plan. In striking contrast to a local situation, we are discussing here a nationwide Medicare Program which involves as an integral part of its operation a large number of hospitals, plans and other instrumentalities.

So much then, in our judgment, for the hypothetical resolution recommending total nonparticipation.

What about resolutions which might recommend something less than total participation? It seems to me that here we are going to be faced with a question — which we are going to have to analyze in each instance — of what the subject matter of the resolution is. If it is an activity which is essential to the Medicare Program, and which, if boycotted, would seriously interfere with the plan, then the same result would follow. For example, I am sure that a concerted refusal on the part of physicians not to sign certifications for hospital

admission would be held to be illegal because without those certifications this plan will be seriously restrained. Each of these activities which would be affected by the group action would have to be carefully analyzed.

Now I think, Mr. Chairman, I have taken more than my time. I would like to emphasize these points in conclusion. I have necessarily been talking about group action in the form of resolutions by AMA, the top policy-making body for medicine in the United States. Of course, the same rules

are applicable to group action whether in the form of resolutions or not. Because I have stressed group action, and necessarily have had to do so in the few minutes I have had, I do want to point out again, as I said at the outset, that any physician can, without violating the Sherman Act, participate or not participate in this Medicare Program as he sees fit if it is not as a matter of concerted action; and secondly, this Association can furnish him with all objective information necessary so that he can make an informed judgment as to whether he should participate. Thank you, gentlemen.

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“‘Do we trust a Washington bureaucrat more than we do ourselves to solve problems that rest on our own doorsteps’ he asked.

“‘Or are we just too lazy to act; too blind to see; or too ignorant to understand’.” (Eisenhower as quoted in Chicago Tribune, December 10, 1964).

# "The Role Of Blue Shield In The Medicare Program"\*

## Introduction

THE Medicare Law is complex, and it is clear that many problems must be overcome if the new health care program for the elderly is to be implemented successfully. In my opinion, the carrier role under Part B, Title XVIII, the Supplementary Medical Insurance Program, is far more difficult than that of the intermediary under Part A, the Basic Hospital Plan.

Carriers under Part B will have to deal with a far greater number of parties providing services, in this instance physicians, and carriers will also be called upon to see that some very sensitive areas in the physician-patient-hospital relationships function smoothly.

Before examining the broad functions of the carrier under Part B, it is essential to understand that the "provider of services" in Public Law 89-97 refers only to hospitals, nursing homes and home health agencies—not to physicians.

The functions of the carrier under Part B may be listed as follows:

1. Determining the amount of payment due to physicians and other persons, including patients, and making the payment. The law specifies that payment may be made to the patient on a receipted bill or as an assignment by the patient to the physician.
2. Determining compliance with the requirements of the law as to utilization review in hospitals and nursing homes.
3. Assisting physicians and others in the development of procedures relating to utilization practices; making studies of the effectiveness of such procedures and methods for their improvement; assisting in the application of safeguards against unnecessary utilization of services furnished by phy-

HOWARD HASSARD

General Counsel

National Association of Blue Shield Plans

sicians and other persons to individuals entitled to benefits; and providing procedures for and assisting in arranging, where necessary, the establishment of groups outside hospitals, *preferably through local medical society cooperation*, to make a review of utilization.

4. Serving as a channel of communication relating to the program's administration;
5. Generally assisting in the administration of the supplementary plan.

I think it is important to point out that Blue Shield Plans are *presently* carrying out these functions for 56 million subscribers, including 5 million aged. All Blue Shield Plans *are qualified* to serve as carriers under the medical-surgical portion of the Medicare Law.

## Fees

I would now like to comment briefly on the broad functions of carriers and to suggest some standards which carriers should meet before they qualify for participation.

The Supplementary Medical Insurance Program will allow a patient or, by way of assignment, a physician to collect from the carrier 80 per cent of the charge, provided that charge is reasonable and customary to the charging physician and within the level of prevailing charges in that locality. The law states that the contract between the Secretary of HEW and the carrier shall provide that the carrier "will take such action as may be necessary to assure that, where payment under this part for a service is

\*Medicare conference sponsored by American Medical Association, Chicago, Illinois, October 1, 1965.



on a charge basis, such charge will be reasonable and not higher than the charge applicable, for a comparable service and under comparable circumstances, to the policyholders and subscribers of the carrier."

In effect, this provision sets a standard for reimbursements. It is of paramount importance, therefore, that the carrier selected should have an ability to work closely with the medical profession.

In addition to the provision I have just quoted, the law also states that in determining the reasonable charge for services, there shall be taken into consideration the customary charges for similar services generally made by the physician or other person furnishing such services, as well as the prevailing charge in the locality for similar services.

In determining the amount of payment due physicians and in making the payments, carriers under the program must have intimate and long-standing relationships with physicians. Only then will they be able to determine the charges which would be reasonable and acceptable to members of the medical profession. It is essential to the operation of the program to have professional relations personnel who routinely visit practicing physicians and also maintain organizational relationships with the component medical society.

We must also keep in mind that unlike the Hospital Insurance Program in which a single claim covers the entire scope of services provided by the hospital, the typical case under the Supplementary Medical Insurance Program will require many separate claims and charges. The carrier, therefore, must have within its organization physicians, nurses, or other medically trained personnel to interpret and define the services rendered, as reported on the physician's claim form.

### Utilization Review

As for utilization, it appears reasonable that carriers selected should already have demonstrated their willingness and ability to participate with medical societies, hospital medical staffs, community planning

groups, etc., in the establishment and operation of utilization review programs.

The carriers must have personnel experienced in this sensitive area of medical practice. These individuals must understand the local practice of medicine, the relationship between the practitioner and the hospital, between physicians and the medical society, and so on. The carrier personnel should be attuned to the dynamic nature of medicine and be able to assist in incorporating needed changes in the utilization review process.

It would also be helpful for the carrier to be in a position to carry out an educational program to set the proper climate for a utilization review program. This area of professional relations demands intimate knowledge of physicians, the medical society, and the practice of medicine in the area.

The carrier should also have the ability to perform statistical analysis, not only from data developed under the Medicare Program but also data accumulated in connection with the provision of medical-surgical coverage to other segments of the population. It is only through this type of comparison that utilization practices can be effectively analyzed. It follows that carriers should have persons other than the elderly enrolled under their programs so that the utilization experiences of various groups can be compared.

Finally, the carrier must work with the county medical society and its review mechanisms in order to assist in the development of professional education programs in which optimum utilization patterns and practices are described. In individual cases, it may be necessary for the carrier to approach an appropriate medical society committee to prevent future cases of unnecessary utilization. Many local medical societies now have such committees functioning.

Under Part B, the carrier must also be able to serve as a channel of communications in administering the program. Existing carrier publications which regularly reach individual practitioners and medical societies would be extremely helpful in this regard. The carrier should also have access to an up-to-date mailing list of practitioners in the area.

In addition to disseminating information, the carrier should be in a position to provide interpretive information on the Medicare Program whenever necessary. This would require that the carrier have sound knowledge of the program, plus an understanding of the local practice of medicine.

As you are well aware, the physician-patient relationship is a confidential one. Therefore, the carrier must have personnel who can assume all facets of processing claims, while guarding the confidential nature of the physician-patient relationship.

### **General Administration**

Finally, the carrier should engage in various types of medical economic research and carry out programs to improve professional relations. The carrier should have personnel who can conduct experiments in new concepts of insurance and prepayment. These studies should be aimed at the promotion of

quality care and proper medically-oriented utilization.

### **Conclusion**

It is clear that the administration of reasonable charges under the Medicare Program and the administration of the utilization review program under the Medicare Law will be among the prime responsibilities to the carrier. The carrier role, therefore, is of critical importance to the medical profession.

As a lawyer, as a medical society executive, as general counsel of the National Association of Blue Shield Plans, I know that the carrier under Part B would be cast in a trouble-filled role. However, I also believe that Blue Shield is equipped to serve the medical profession in a carrier role if this is medicine's wish. Any by undertaking this heavy responsibility, Blue Shield would also be performing a valuable service to the public and the medical profession.

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Libel may be defined as any false statement, written or broadcast, which tends to (1) bring any person into public hatred, contempt, or ridicule; (2) cause him to be shunned or avoided; or (3) injure him in his business or occupation. (From *Say It Safely*, Ashley. University of Washington Press, 1959).

## Coming Meetings

### CRIPPLED CHILDREN'S CLINICS—

December 4 — North Platte, Adams Junior High School Building

December 18 — Falls City, Elks Club

January 8 — Lexington, High School Building

January 15 — Wayne, Wayne State Teachers College

January 29 — Scottsbluff, St. Mary's Hospital

### CONTINUING EDUCATION COURSES FOR PHYSICIANS — Sponsored by the University of Nebraska College of Medicine's Office of Continuing Education:

December 9-10, 1965 — "Breast Cancer for the Practitioner" (Omaha Campus)

December 16-17, 1965 — "Clinical Laboratory Medicine" (Omaha Campus)

January 20-21, 1966 — "Advances in Obstetrics and Gynecology" (Omaha Campus)

1965 POSTGRADUATE COURSES SPONSORED BY THE AMERICAN COLLEGE OF CHEST PHYSICIANS — Clinical application of cardiopulmonary physiology: Knickerbocker Hotel, Chicago, October 18-22. Diagnosis and treatment of diseases of the heart and lungs: Barbizon Plaza Hotel, New York City, November 15-19. What's new in the diagnosis and treatment of cardiovascular and pulmonary diseases: Fountainebleau Hotel, Miami Beach, January 24-28, 1966. Clinical application of cardiopulmonary physiology: Ambassador Hotel, Los Angeles, February 14-18, 1966. Cine-angiographic techniques in cardiovascular diseases: Cleveland Clinic, Cleveland, April 11-13. Write to: American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

American College of Physicians  
Postgraduate Courses, 1965-1966 —

The following courses are made possible by the generous cooperation of the directors and institutions involved. Tuition fees: Members, \$60; Nonmembers, \$100. Registration forms and requests for information

are to be directed to: Edward C. Rosenow, Jr., MD, Executive Director, The American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.

— 1965 —

### PSYCHIATRY FOR THE INTERNIST —

Dec. 6-10, University of Southern California, Los Angeles, Calif.; Allen J. Ene-low, MD, Director.

— 1966 —

MEDICINE OF TOMORROW: RECENT ADVANCES IN INTERNAL MEDICINE — Jan. 10-14, University of Alabama Medical Center, Birmingham, Alabama; Howard L. Holley, MD, FACP, Director.

CURRENT CONCEPTS OF INFECTIOUS DISEASE — Jefferson Medical College, Philadelphia, Pa.; Robert I. Wise, M.D., F.A.C.P., Director; Joseph F. Rodgers, M.D., Co-Director. February 7-11, 1966.

MEDICAL GENETICS — The Johns Hopkins Hospital, Baltimore, Md.; Victor A. McKusick, M.D., F.A.C.P., Director. Feb. 14-18, 1966.

CANCER — Presbyterian-St. Luke's Hospital, Chicago, Ill.; Samuel G. Taylor, III, M.D., F.A.C.P., Director. Feb. 21-25, 1966.

SECOND NATIONAL SYMPOSIUM ON COCCIDIOIDOMYCOSIS — December 8-9-10, 1965, Del E. Webb Towne House, Phoenix, Arizona. For further information, contact: Arizona Tuberculosis and Health Association, Inc., 733 West McDowell Road, Phoenix, Arizona 85007.

Future Meetings of the American College of Surgeons—

— 1966 —

BAL HARBOUR, FLORIDA, January 13-15. Sectional Meeting. Americana Hotel.

HOUSTON, TEXAS, January 31 - February 2. Sectional Meeting. Sheraton-Lincoln Hotel.

CLEVELAND, OHIO, March 14-17. Annual 4-Day Sectional Meeting for Doctors and Graduate Nurses. Sheraton-Cleveland and nearby hotels.



ANNUAL CLINICAL CONGRESS, October 10-14, 1966. San Francisco, California.

For any advance information address: Secretary, American College of Surgeons, 55 East Erie Street, Chicago, Illinois 60611.

THE HAHNEMAN MEDICAL COLLEGE AND HOSPITAL of Philadelphia offers the following Postgraduate Education Courses during 1965 and 1966:

—December 8-10, 1965: A Hahneman Symposium on New Concepts in Gynecological Oncology; Dr. George C. Lewis; Sheraton Hotel.

—April 20-23, 1966: 16th Hahneman Symposium, Arterial Occlusive Disease; Dr. Albert N. Brest; Marriott Motor Hotel.

—December, 1966: 17th Hahneman Symposium, Nutritional Dysfunction; Dr. Donald Berkowitz; Sheraton Hotel, Philadelphia.

STUDY AND SKI — Scientific meetings, a winter ski vacation, a cocktail party, and a dinner-dance are planned for the 31st Midwinter Clinical Session of the Colorado Medical Society, March 1 through 3. Write to the Colorado Medical Society, 1809 East 18th Avenue, Denver, Colorado 80218.

CONFERENCE ON AIR POLLUTION RESEARCH — The AMA has scheduled the first Air Pollution Medical Research Conference for March 2-4, 1966, at the Ambassador Hotel in Los Angeles. Six additional cooperating organizations include The American College of Chest Physicians, the American Thoracic Society, the U.S. Public Health Service, the California State Department of Public Health, the California Medical Association, and the Los Angeles County Medical Association. Write to Air Pollution Medical Research Conference, Department of Environmental Health, AMA, 535 N. Dearborn St., Chicago, Illinois 60610.

CONTINUING EDUCATION — Closed Chest Resuscitation; University of Nebraska

College of Medicine, at Eppley Research Institute, March 8, 1966 (for physicians, 9th for dentists, and 10th for nurses). Info: Continuing Education, University of Nebraska College of Medicine, 42nd and Dewey, Omaha 5.

MICROCIRCULATION — Microcirculation is to be the topic of discussion at the Heart Association of Southeastern Pennsylvania's Fifth National Symposium to be held at the Philadelphia's Sheraton Hotel on March 10 and 11, 1966. Write to Lyle L. Perry, Heart Association of Southeastern Pennsylvania, 318 S. 19th Street, Philadelphia, Pa. 19103.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS — "Vision for the Space Age;" Houston, Texas, Rice Hotel, March 24-26, 1966. Info: Director of Information John D. Coleman, 16 East 40th Street, New York 10016.

SIGHT- SAVING CONFERENCE — The 1966 annual Sight-Saving Conference of the National Society for the Prevention of Blindness, Inc., will take place from March 30 through April 1, 1966, at the Hotel Roosevelt, New York, N.Y. Write to John D. Coleman, Director of Information, National Society for the Prevention of Blindness, Inc., 16 East 40th St., N.Y.C.

ENVIRONMENTAL HEALTH — The Third Congress on Environmental Health Problems of the AMA will be held April 4-5 at the Drake Hotel in Chicago. Write to EHC, Department of Environmental Health, AMA, 535 N. Dearborn St., Chicago, Illinois 60610.

INDUSTRIAL HEALTH — The 1966 American Industrial Health Conference will take place April 25-28 in Detroit, Michigan. Headquarters will be at the Sheraton Cadillac Hotel, meetings in Cobo Hall. Write to: American Industrial Health Conference, 55 East Washington Street, Chicago, Illinois 60602.

ANESTHESIOLOGY — Third Annual Midwest Conference on Anesthesiology. Con-

tinental Plaza Hotel, Chicago, Illinois, April 28-30, 1966. Write to T. L. Ashcraft, M.D., 33 East Cedar Street, Chicago, Illinois 60611.

**POSTGRADUATE COURSE IN LARYNGOLOGY AND BRONCHOSOPHAGOGY** — A postgraduate course in laryngology and bronchoesophagology will be conducted by the Department of Otolaryngology of the Illinois Eye and Ear Infirmary and the College of Medicine of the University of Illinois at the Medical Center, Chicago, from March 21 through April 2, 1966. Write to the Department of Otolaryngology, College of Medicine of the University of Illinois at the Medical Center, Postoffice Box 6998, Chicago, Illinois 60680.

**FIRST ANNUAL BIOMEDICAL LASER CONFERENCE** — June 17-18, Sheraton-Boston Hotel, Boston, Massachusetts.

**TENTH WORLD CONGRESS OF THE INTERNATIONAL SOCIETY FOR REHABILITATION OF THE DISABLED** —September 11-17, 1966, Rhein-Main-Hall, Wiesbaden, Germany.

**INTERNATIONAL CANCER CONGRESS** —The IX International Cancer Congress will be held in Tokyo, Japan, from October 23-29, 1966. Write to Hirsch Marks, MD, 435 East 57th St., New York 22, N.Y.

## Medicare in Operation

### Payment for Military Dependents Medical Care—

From time to time we receive correspondence from dependents regarding the balance of a Medicare bill already paid by the Government.

Public Law 569-84th Congress, provides that the bills paid by the Government must be payment in full for the services rendered. All physicians are given the opportunity to determine personally whether or not they desire to participate in the program and furnish this case. If they accept the patient,

they must accept the payment as full compensation for their services.

The DA Form 1863-2 which is the Medicare form for services by civilian physicians and dentists, requires the signature of the physician or dentist in Item No. 29 on the claim form before payment can be made. The statement in Item No. 29 reads as follows:

I will accept (1) the amount listed in Item 26, which is my usual fee, or the amount listed in the dependents medical care program Schedule of Allowances, whichever *is less*, as full payment for the services described above.

The fee schedule as such is nonexistent. The Government set the maximum amount to be allowed for some 1,500 procedures in medicine and surgery. But these maximum fees are to apply only where they are the existing local charges.

Once the payment has been effected as described, neither the Government nor the patient has further financial liabilities for the same service.

If the physician is unsatisfied with Medicare benefits paid to him, special cases will be "arbitrated." This will be done by the Policy Committee of the Nebraska State Medical Association.

The original schedule was negotiated in 1956, by the Nebraska State Medical Association, and the contract is renewed annually. The relative value studies of both Nebraska and California were used in the negotiation.

## THE MONTH IN WASHINGTON

Washington, D. C. — Federal agencies relaxed regulations for sale of Ipecac, ordered warning labels on certain antihistamines, and cracked down on two patent medicines.

The Food and Drug Administration decided that ready availability of Ipecac as a poison remedy outweighed the dangers of possible misuse, and placed it back on the list of drugs for sale over the counter without a prescription.

Since Ipecac was placed on a prescription-



only basis in January, 1964, the American Medical Association, the American Academy of Pediatrics, and the Association of Poison Control Centers had urged that the vomit-inducing drug be returned to its former status.

Under the new FDA ruling, FDA's Bureau of Medicine told the Pediatrics group in Chicago that FDA decided it would be in the public interest to permit Ipecac to be sold over the counter in one-fluid-ounce bottles with special warnings on dangers of its misuse.

The FDA also ruled that in the future antihistamines containing meclizine, cyclizine and chloro-cyclizine must bear labels warning against use by pregnant women without medical advice. However, they were left on the over-the-counter list. The FDA said massive doses of these drugs in test animals had produced congenital abnormalities, but there had been no evidence they have caused abnormalities in human babies.

Chas. Pfizer & Co., Inc., one of the companies that manufacture such antihistamines, protested the decision as not being "in accordance with the medical facts."

A House Government Operations Subcommittee headed by Rep. H. L. Fountain (D., N. C.) recently had criticized the FDA for its handling of these anti-histamines, contending that stronger warnings were needed and indicating that they should be prescription items.

The FDA ordered a halt to the sale of Alergimist "A" and "B," widely advertised as "cures" for hayfever, bronchial asthma, migraine headaches and allergic dermatitis.

The product has been actively promoted through newspaper, radio and TV ads without having been passed by the agency as either safe or effective. The product, sold without a prescription, was being distributed by the Brunson Corporation of Miami Springs, Fla. FDA said the same concern previously distributed Allergimist (with two "I"s) until an injunction in September, 1964, was obtained against its interstate shipment.

The Federal Trade Commission ordered the J. B. Williams Co. of New York City

to stop allegedly misrepresenting the effectiveness of "Geritol" liquid and tablets. The Commission ruled that Geritol television commercials and newspaper advertisements falsely represent that all cases of tiredness, loss of strength, run-down feeling, nervousness, and irritability indicate a deficiency of iron and that the common, effective remedy for these symptoms is Geritol.

Geritol is not beneficial except in the small minority of persons whose tiredness symptoms are caused by a deficiency of iron or one or more of the vitamins contained in the preparation, the FTC said.

More and farther-reaching health legislation was enacted into law this year than ever was acted by a previous Congress.

Medicare and the heart disease, cancer and stroke programs topped the list of such legislation enacted into law, but there also were other important new health programs authorized. Several existing ones were expanded.

Approved health legislation included:

—A \$787 million aid program for medical, pharmaceutical and other health schools. It authorized for the first time federal scholarships for students and operating funds for medical schools.

—A \$105 million program for aid for medical libraries.

—A \$250 million, three-year extension of grants for construction of health research facilities.

—Authorization of strict federal controls on manufacture and sale of barbiturates and amphetamines.

—Requirement that cigarette packages, beginning Jan. 1, 1966, carry a health hazard warning.

—Extension of the vaccination program and expansion of it to include measles.

—Annual appropriation of a record \$1.2 billion for the National Institutes of Health.

—Three new assistant secretaries of Health, Education and Welfare — one for health affairs.



—A four year \$92.5 million program of aid to municipalities for construction of garbage disposal plants and research in the field.

—Greater federal powers in the water pollution field and \$300 million to help communities build sewage plants.

—New federal powers to control air pollution, including requirement that new autos have devices to reduce exhaust fumes.

—Expansion of the federal vocational rehabilitation program, including \$300 million in grants for building and initial staffing of rehabilitation facilities and workshops.

—A four-year, \$173 million program for initial staffing of community health centers.

—An Administration on Aging in the Health, Education and Welfare Department.

—Appropriation of \$157 million for Project Headstart — nursery school training and medical examinations of pre-grammar school children from low-income families.

—A \$69 million hospital program for the Appalachia area.

—Automatic rank of lieutenant general or vice admiral for surgeons general of the army, navy and air force.

—Extension for three years of the program of grants for health services for domestic migrant agricultural workers.

—A one-year extension of program of grants for general health aid and for community health services.

Community vaccination programs against measles have been recommended by the Surgeon General's Advisory Committee on Immunization.

In extending the federal vaccination program for polio, diphtheria, tetanus and whooping cough, Congress this year expanded it to include measles.

The Committee said that measles is one of the most important causes of serious illness in children and recommended that continuing "maintenance" programs aimed at vaccinating children about one year of age be established in all communities.

## Announcements

### 1966 Norman A. Welch, M.D. Essay Contest—

The AMA will sponsor a Medical Ethics Essay Contest, to be known as the Norman A. Welch, M.D. Essay Contest, through its Judicial Council. The contest will be open during this academic year to junior and senior students in accredited schools in the U.S. Rules and suggested topics may be had by writing to the Department of Medical Ethics, AMA, 535 N. Dearborn Street, Chicago, Illinois 60610. They may also be obtained at the offices of deans of medical schools. The deadline for entries is June 1, 1966. The first prize is \$500; second, \$300; and third, \$200.

### Student Essay Contest—

The American Association for the History of Medicine will award its William Osler Medal for the best unpublished essay on a subject dealing with medical history written by a student in a medical school in the U.S. or Canada. Candidates for the degree of Doctor of Medicine, or those who graduated in 1965, are eligible. Maximal length is 10,000 words. Essays must be submitted by March 23, 1966, to the Chairman of the Osler Medal Committee, William K. Beatty, Librarian and Professor of Medical Bibliography, Northwestern Medical School, 303 East Chicago Avenue, Chicago, Illinois 60611.

### Omaha Research Society (Affiliated with The American Federation for Clinical Research)—

Thursday, December 2, 1965 — 8:00 p.m., Room B37, St. Joseph's Hospital (Creighton University) at 10th Street and Martha Avenue.

1. Effects of Virus on Human Genome. James Eisen, Associate Professor of Human Genetics and Helen W. Reihart, Research Associate in Human Genetics, Nebraska Psychiatric Institute, University of Nebraska.
2. Effect of Various Types of Biliary Diversion on Serum Cholesterol. Harry Keig and Fletcher Miller, Surgery Department, Creighton University.
3. Degenerative Parathyroid Changes As-

sociated with Ehrlich's Ascites in Mouse Tumor. Timothy Rutz, Department of Anatomy, University of Nebraska.

#### Coffee Break

4. Radiodensographic Renograms Produced in Dogs by Radioisotopic Radiodensitometry; Physiologic Considerations. William T. Blessum and Alfred W. Brody, Department of Medicine and Physiology, Creighton University.
5. The Effect of Renin on Aldosterone Secretions in the Rat. Albert Carr, Instructor in Internal Medicine, University of Nebraska.
6. A Study of Mitral Valve Function During Sinus Rhythm and Atrial Fibrillation in Dogs. Nosrat Massih, Vincent Runco, Hugh S. Levin, Thomas P. O'Keefe and Richard W. Booth, Creighton University.

Remaining meetings for this academic year will be held on February 24 and May 12, 1966, at 8:00 p.m.

Notes: Regular Members: Dues of \$1.00 for 1965-1966 are due. Please mail to Dr. A. W. Brody, Secretary-Treasurer, (Creighton University, College of Medicine, 302 North 14th Street, Omaha, Nebraska 68102) or bring to meeting. Special membership dues of 50c to graduate and medical students, Interns and Residents; *welcome*.

#### New AMA Nursing Director—

The AMA has appointed D. Ann Sparmacher, R.N. director of its Department of Nursing; she succeeds Florence M. Alexander, Ph.D., R.N., who will be on the faculty of the University of Michigan and will also continue as consultant to the AMA on nursing affairs. The Department of Nursing of the AMA conducts liaison activities between the medical and nursing professions at local, state, and national levels.

#### F.A.C.S.—

Fellowship in the American College of Surgeons is being conferred, as we go to press, upon these Nebraska physicians: Grand Island: John E. Fitzpatrick, Jr.; Omaha: James R. Scott-Miller, John F. McLeay, and Carlos R. Mota.

#### Health Insurance Benefits Advisory Council—

We are advised by the U.S. Department of Health, Education, and Welfare (known more or less popularly as HEW, and with whom we shall have much to do in the future) that a 16-member group appointed by HEW Secretary John W. Gardner, to help the government shape policies for the administration of the Medicare program, plans to hold its first meeting in Washington, D. C., on November 12 and 13, as we go to press.

Membership of the Health Insurance Benefits Advisory Council was announced by President Johnson on November 10, and includes Kermit Gordon; William E. Beaumont, Jr.; Dorothy A. Cornelius, R.N.; Nelson H. Cruikshank; C. Manton Eddy; the Very Reverend Msgr. Harrold A. Murray; Nathan J. Stark; and Doctors Bernard Bucove, Kenneth W. Clement, Caldwell B. Esselstyn, Jose A. Garcia, Russell A. Nelson, Howard P. Rome, Samuel R. Sherman, Ray E. Trussell, and Carroll L. Witten.

#### The Hospital-Based Specialists—

The U.S. Department of Health, Education, and Welfare announces a meeting of a 44-member consultant group on November 8 and 9 at social security headquarters in Baltimore. Policies for the reimbursement of radiologists, anesthesiologists, pathologists, and physiatrists were discussed for the care of older people under the Medicare program.

The consultant group is made up of members of the following organizations: American Medical Association, National Medical Association, College of Radiology, College of Pathology, American Academy of Physical Medicine and Rehabilitation, American Hospital Association, American Association of Hospital Accountants, American Osteopathic Association, American Osteopathic Hospital Association, Accredited Proprietary Hospital Association of Nassau and Suffolk Counties, Blue Cross Association, Catholic Hospital Association, Insurance Industry, Kaiser Health Insurance Plan, National Association of Blue Shield Plans, State Representatives, Public Health Service, Welfare Administration, Social Security Administration Consultants. We counted 45 members, we thought



the matter was clear, and we could find no anesthesiology representatives.

## News and Views

### We Build Medical Schools—

There were 77 medical schools in the U.S. in 1945, 88 in 1965; there will be 101 in 1970. In addition, at least ten other institutions have reasonably good expectations of developing new medical schools. We seem to be doing much better in this regard than our brethren in England, where the system of medical practice is still different from ours.

### Topical Steroid Preparations—

Eli Lilly and Company announces the introduction of two half-strength preparations of its topical steroids Cordran® (flurandrenolone, Lilly): Cream Cordran, Half Strength, 0.025%, and Ointment Cordran, Half Strength, 0.025%.

### New Tablet for Management of Hypertension—

A. H. Robins announces the introduction of Exna®-R, combining a thiazide diuretic and reserpine in a single tablet for more effective management of hypertension.

### E. R.—

The AMA has prepared a sample agreement for the operating of a hospital emergency department by a partnership of physicians on the medical staff. The sample contract was developed by the Law Department of the AMA and was prepared in response to many requests from hospital medical staffs that could not easily provide staffing through voluntary arrangements. According to the agreement, the partnership provides the services of a licensed physician on a continuous basis, around the clock, while the hospital provides space, equipment and supplies, maintenance, and nursing and other nonphysician services.

Copies of the agreement may be obtained from the Department of Hospitals and Medical Facilities, AMA, 535 North Dearborn Street, Chicago, Illinois 60610.

## News from Our Medical Schools

OMAHA—Physicians from medical schools in Colorado, Pennsylvania, Tennessee and New York and one from the University of Manitoba, Winnipeg, Canada, will present sessions at two upcoming continuing education courses for physicians early next year. Both courses will be conducted on the University of Nebraska College of Medicine campus.

Three guests will give sessions at the January 20-21, 1966 course on "Advances in Obstetrics and Gynecology."

Dr. Paul Bruns, professor of obstetrics, department of obstetrics and gynecology at the University of Colorado, Denver; Dr. T. M. Roulston, professor and chairman of the department of obstetrics and gynecology at the University of Manitoba, Winnipeg, Canada; Dr. Donald Hutchinson, professor and chairman of the department of obstetrics and gynecology at the University of Pittsburgh, Pittsburgh, Pa.

Guest lecturers for the continuing education course, "Current Status of Cardiovascular Disease," on February 3-4, 1966 are:

Dr. Gene H. Stollerman, professor and chairman of the department of medicine at the University of Tennessee at Memphis and Dr. J. Scott Butterworth, associate professor of medicine at New York University, New York City.

## Human Interest Tales

Doctor Charles W. McLaughlin, Omaha, was crowned King Ak-Sar-Ben LXXI in late October.

Doctor James Rogers has announced that he is leaving Ord for a new practice in Klamath Falls, Oregon.

Doctor Warren Richad, Hastings, is the new president of the Mary Lanning Memorial Hospital Medical Staff.

Doctor James D. Bell, York, participated in a regional aviation medical seminar in Kansas City in November.



Doctor D. R. Stephenson has located in Norfolk where he is a staff psychiatrist at the Norfolk State Hospital.

Doctor Gordon Francis, Arapahoe, has been named president of the Southwest Nebraska County Medical Society.

Doctor Thomas Hinrichs, Tacoma, Washington, has moved to North Bend and started his practice on the first of November.

Doctor James D. Hayhurst, Scottsbluff, spoke at an October meeting of the West Nebraska General Hospital Auxiliary.

Doctor Otis Miller, Ord, was recently elected president of the Nebraska Chapter of the American Academy of General Practice.

Doctors F. C. Obert and Bruce Hutson, Red Cloud, have moved into their new clinic building, located at Third and Cedar in Red Cloud.

Doctor F. Marshall Zahller, Omaha, was elected president of the Board of the Child Saving Institute in Omaha at the group's annual meeting.

Doctor Horace V. Munger, Lincoln, Secretary-Treasurer of the N.S.M.A., was recently elected president-elect of the South-Central Section of the American Urological Association.

Doctor John E. Fitzpatrick, Jr., Grand Island; and Doctors James R. Scott-Miller, John F. McLeay, and Carlos R. Mota, Omaha, were introduced as Fellows at a recent clinical congress of the American College of Surgeons held in Chicago.

## Deaths

ANDERSEN, Maine C. — Omaha physician, Dr. Maine C. Andersen, age 69, died October 3, 1965 after a brief illness. A longtime Omaha resident, Dr. Andersen was an internist, specializing in diseases of the heart. He was the Chief Medical Examiner of the World Insurance Company of Omaha. Born in Dannebrog, Nebraska, he served as an officer in World War I.

## The Woman's Auxiliary

Dawson County Medical Association and Auxiliary Meet—

The fall meeting of the Dawson County Medical Association and Auxiliary met Monday, October 4, in Gothenburg. Dr. Clinton Sturdevant of North Platte was guest speaker for the doctors. The wives met with Mrs. B. W. Pyle and discussed business and upcoming events.

It was announced that Mrs. J. Whitney Kelley, State Auxiliary President, and Mrs. Fay Smith, Vice President will be guests at the regular meeting and luncheon on November 19. Mrs. Victor Norall is general chairman for the event.

The second annual Paramedical Career Day Tea will be held at the Elks building in Cozad on November 17. This tea is of an informative nature for Junior and Senior High School students throughout Dawson County who are interested in pursuing some form of medical career. Mrs. Watson, Mrs. Perry and Mrs. Hronac are the committee in charge of arrangements.

It was disclosed that a total of six area students are presently using money from the Auxiliary Loan Fund for their education in a medical field.



## Know Your Blue Shield Plan

1965 Blue Shield Annual Program Conference—

An outstanding array of speakers was gathered for the 1965 Blue Shield Annual Program Conference held October 25-26 at the Drake Hotel in Chicago. More than 400 Blue Shield directors and staff members as well as Plan trustees and medical society representatives attended.

The theme of this year's Conference was "Challenge to Responsibility — Met Through Innovation and Communication." In contrast to other conferences which featured individual presentations, the sessions this year were

comprised of a series of panel discussions in which representatives of various groups presented their views of Blue Shield. After the panelists finished their introductory remarks, there were question-and-answer periods. These periods resulted in lively and interesting discussions among the panelists. A Blue Shield representative participated on each panel.

The first of these panels dealt with "The Consumer, the Physician and Blue Shield." Panelists included George Bugbee, director of the Center for Health Administration Studies of the University of Chicago; Dr. H. Russell Brown, chairman, Committee of Insurance and Prepayment Plans of the AMA's Council on Medical Services; and Denwood N. Kelly, executive director of Maryland Blue Shield.

The second panel of the day dealt with "Labor, Management and Blue Shield." Melvin A. Glasser, director of the Social Security Department, United Auto Workers; R. A. Albright, vice president — administration, United States Steel and Carnegie Pension Fund; and Edwin R. Werner, vice president of United Medical Service, Greater New York's Blue Shield Plan, participated. Dr. F. A. DeCesare, a member of NABSP's Professional Relations Committee, was the moderator for the first two panels.

The final panel of the first day was entitled "Medicare — The Immediate Impact and Future Implications." It featured Dr. James Z. Appel, AMA president and chairman of the AMA's Advisory Committee to the Department of Health, Education and Welfare; James W. Murray, staff director, Health Insurance Benefits, Social Security Administration; Robert D. Eilers, assistant professor of insurance, Wharton School of Finance and Commerce of the University of Pennsylvania; Herbert E. Klarman, an associate professor in the School of Hygiene and Public Health of Johns Hopkins University; and John J. Porn, vice president-corporate relations, Utica Blue Cross-Blue Shield.

In addition to these panel discussions, there was an address by Howard Hassard, general counsel for NABSP, entitled "Legal Responsibilities of Trustees."

The second day of the Conference featured the new Prevailing Fees program. "Concept and Progress of the Prevailing Fees Program" was the topic of an address by the executive vice president of NABSP. "Implementation of a Prevailing Fees Program" was discussed by a panel composed of Avil McKinney, director of hospital-physician relations, Kentucky Blue Cross-Blue Shield; Leonard Davis, supervisor of hospital and physician relations, Delaware Blue Cross-Blue Shield; and William Love, executive assistant of the Chicago Blue Cross-Blue Shield Plan.

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#### WHAT'S NEW IN PEDIATRICS

(Continued from page 593)

actions have been encountered in many thousands of injections.

Since there have been broad advances in knowledge concerning the nature of allergic diseases and improved methods of securing hyposensitization to the various specific allergens, there is now even less excuse to deny the allergic individual, particularly if he is a child, definite treatment.

(R) Alpyral. Dome Chemicals Inc.

Allergen Laboratories  
125 West End Avenue  
New York, New York

G. E. STAFFORD, M.D.,  
Clin. Prof. of Pediatrics,  
U of Nebr. Medical School

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**Jaundice During Treatment With An Oral Contraceptive, Lyndiol** — G. Cullberg, R. Lundstrom, and U. Stenram (University, Uppsala, Sweden), *Brit Med J* 1:695, March 13, 1965.

A case of jaundice which appeared during treatment with the oral contraceptive lynestrenol with mestranol (Lyndiol) is reported. Laboratory data of the case include elevated levels of bilirubin, alkaline phosphatases, and transaminases. Biopsy of the liver showed intrahepatic cholestasis and hepatocellular damage. It is probable that the jaundice was caused by the drug. The case is compared to reports of similar cases in the literature.





# Books



**Manual of Medical Therapeutics**, edited by R. C. Packman, M.D. and R. D. Utiger, M.D. Published in 1964 by Little, Brown and Company of Boston, Massachusetts. 272 pages (5½" by 9"). Price \$5.50.

This is the 17th edition of a publication which owes its success entirely to grass-roots enthusiasm and word-of-mouth promotion. Through years of use and seventeen careful revisions this book has achieved a maturity and depth that establishes it as a standard detailed guide to the management of major diseases.

Here you will find complete discussions of the most important groups of drugs — including preparations, dosages, side effects, and clinical applications. Management of diseases is spelled out in specific terms and arranged in logical, easy-to-locate categories. Mechanisms of drug action and pathologic physiology are discussed in detail when applicable.

This manual has been a joint effort of the members of the Department of Medicine of the Washington University School of Medicine in St. Louis, Missouri. It serves as a guide to the course in medical therapy presented to the senior students at the above school.

Anyone—student, intern, resident, and practitioner—who needs an up-to-date practical guide to medical therapeutics will be wise to invest in the current edition of this inexpensive manual.

**Neurological Surgery of Trauma**, edited by Arnold M. Meierowsky, M.D. Published in October, 1965 by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 604 pages (8" by 10½") with 273 illustrations. Price \$6.25.

This book relates in fascinating detail the remarkable progress made during the Korean War in the field of neurological surgery of trauma. It stresses earliest possible definitive management of penetrating wounds and deals with minute aspects of the surgical management of every part of the central and peripheral nervous system.

Edited by Arnold M. Meierowsky, M.D., the text was written by eminent specialists who have gained international recognition in their fields.

When the unexpected war in Korea broke out, the achievements of World War II had been shelved and almost forgotten. Those concerned with neurological surgery of trauma in the Korean War had to rediscover and relearn. Their experiences are exciting and truly fantastic. Among the 1,105 casualties in Korea with penetrating craniocerebral trauma who reached an Army neurosurgical installation from 1 September 1950 to 31 August 1952, the mortality was only 7.78 percent. Still more impressive is the record of 387 patients with penetrating com-

pound wounds of the spinal canal, of whom only 14 died, a mortality of 3.6 percent.

This volume is a sound exposition of neurosurgery in general, including not only the neurosurgery of war—when such trauma occurs in epidemic and bizarre forms—but also trauma as it is encountered in civilian life. Diagnostic procedures, resuscitation, treatment, and rehabilitation are all carefully described. The chapters devoted to urological management and to physical and vocational rehabilitation are of great value, since these problems deserve constant thought and watchful attention. Those dealing with intervertebral disks are surgically interesting and informative. The final chapters deal with peripheral nerve surgery. The diagnostic measures recommended are clearly described and amply illustrated, and should be extremely helpful to all surgeons and medical practitioners. The reader will find throughout the text numerous examples of the improvisation of needed equipment by simple adjustments or adaptation of equipment or supplies within reach.

Every war produces its unique conditions and problems. Just as World War II was vastly different from World War I, so the Korean War was entirely different from World War II. This volume demonstrates what superb management and organization, with prompt and expert surgery by a group of master surgeons, can accomplish. It is a valuable work for the military, but also a classical textbook of neurosurgical trauma.

**First Aid for Emergency Crews** by Carl B. Young, Jr., M.P.H. Published October 1, 1965 by Charles C. Thomas of Springfield, Illinois. 163 pages (5" by 7") with 108 illustrations. Price \$4.50.

Different from any other text on the market today . . . this is a pocket-sized manual that communicates with the man on the firing line . . . giving emergency first aid procedures for ambulance crews, law enforcement officers, fire department personnel, wrecker drivers, industrial supervisors, and doctors and nurses. This book shows by drawings what many others only discuss. Over 100 line drawings illustrate practical emergency procedures. All procedures recommended have been checked and approved by the Committee on Trauma of the American College of Surgeons.

**Current Diagnosis and Treatment** — 1965, written by Henry Brainerd, M.D., Sheldon Margen, M.D., and Milton J. Chatton, M.D. Published in 1965 by Lange Medical Publications of Los Altos, California. 888 pages (7" by 10"). Price \$9.50.

Dr. Brainerd is Professor of Clinical Medicine at the University of California School of Medicine (San Francisco). Dr. Margen is Professor of Human Nutrition at the University of California (Berkeley).



Dr. Chatton is Clinical Assistant Professor of Medicine at the Stanford University School of Medicine at Palo Alto, California. Assisted by 30 of their colleagues, the above-named authors have written a book intended to serve the practicing physician as a useful desk reference covering the most widely accepted technics currently available for diagnosis and treatment.

Although dealing primarily with internal medical disorders, discussions of other diseases commonly encountered in other specialties (Eye; Ear, Nose and Throat; Obstetrics and Gynecology; Urology; Psychiatry; Dermatology) are included. A new chapter on Medical Genetics has been included. Other useful sections include the following:

- a) Recently introduced and investigational drugs
- b) Drugs recently withdrawn
- c) Chemical analysis of blood and body fluids
- d) Heart-lung resuscitation methods

**Immediate Care and Transport of the Injured**, compiled and edited by G. J. Curry, M.D. Published September 30, 1965 by Charles C. Thomas of Springfield, Illinois. 187 pages (6" by 9"). Price \$7.50.

The editor of this book is a Past Chairman on the Subcommittee on Transportation of the Injured of the American College of Surgeons. Assisted by 20 eminent consultants, he has compiled a book which tells what to do, who should do it, and how to do it — in problems dealing with the management of the injured person.

Some of the special areas covered include the following:

- a) The ambulance . . . equipment needed, qualifications of attendants, speeds
- b) How to deal with respiratory and cardiac arrest, athletic injuries, industrial injuries, ski injuries, diving injuries, and the burned patient
- c) State laws, including a discussion of the Good Samaritan Laws
- d) Mass casualty management.

**Current Concepts in Medical Practice**, edited by John E. Mullins, M.D. Published September 29, 1965 by the C. V. Mosby Company of St. Louis, Missouri. 436 pages (5" by 8"). Price \$10.75.

Assisted by eight medical authorities, Dr. Mullins, a Consultant at Washington University School of Medicine in St. Louis, Missouri, has compiled a summation of recent developments in the field of medicine in a handbook which will be of special value to the practicing physician. The discussions are of sufficient length to be informative and yet brief enough to avoid exhausting the reader.

The need for such an undertaking seems clear. Medical articles and medical journals are showing a geometric proliferation. The practicing physician laboring under an increasing patient load is likely to be overwhelmed by the increasing literary load.

In this book only the common problems encountered in medical practice are considered. Selections of the literature of the past two years are displayed in brief form, but include enough background information to render the topic meaningful.

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Science has made it possible for most people with epilepsy to live normal lives. Yet, epilepsy is still surrounded by fear and superstition, according to The Epilepsy Foundation. For additional facts, write to The Epilepsy Foundation, Washington, D.C. 20005.

# *The Nebraska State Medical Journal*



Volume 50  
January 1965 — December 1965

FRANK COLE, M.D.  
Editor

KENNETH NEFF  
Business Manager

News Printing Co., Norfolk, Nebr.

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# 1965 Membership Roster Nebraska State Medical Association

## COUNCILOR DISTRICT CODES

| District                                                                                                                                                 | Code No. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| First District -----<br>Douglas, Sarpy                                                                                                                   | 1        |
| Second District -----<br>Lancaster, Otoe, Cass                                                                                                           | 2        |
| Third District -----<br>Gage, Johnson, Nemaha, Pawnee,<br>Richardson                                                                                     | 3        |
| Fourth District -----<br>Knox, Cedar, Dixon, Dakota, Antelope,<br>Pierce, Thurston, Madison, Stanton,<br>Cumming, Wayne                                  | 4        |
| Fifth District -----<br>Burt, Washington, Dodge, Platte,<br>Colfax, Boone, Nance, Merrick                                                                | 5        |
| Sixth District -----<br>Saunders, Butler, Polk, Seward, York,<br>Hamilton                                                                                | 6        |
| Seventh District -----<br>Saline, Clay, Fillmore, Nuckolls,<br>Thayer, Jefferson                                                                         | 7        |
| Eighth District -----<br>Cherry, Keyapaha, Brown, Rock, Holt,<br>Sheridan, Boyd                                                                          | 8        |
| Ninth District -----<br>Hall, Custer, Valley, Greeley, Sherman,<br>Howard, Dawson, Buffalo, Grant,<br>Hooker, Thomas, Blaine, Wheeler,<br>Loup, Garfield | 9        |
| Tenth District -----<br>Gosper, Phelps, Adams, Furnas, Harlan,<br>Webster, Kearney, Red Willow, Chase,<br>Frontier, Dundy, Hitchcock                     | 10       |
| Eleventh District -----<br>Lincoln, Perkins, Keith, McPherson,<br>Garden, Arthur, Logan, Deuel                                                           | 11       |
| Twelfth District -----<br>Scotts Bluff, Banner, Box Butte, Morrill,<br>Kimball, Cheyenne, Sioux, Dawes                                                   | 12       |

## COUNTY CODES

| County                                  | Code No. |
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| Adams -----                             | 1        |
| Antelope -----                          | 2        |
| Boone -----                             | 3        |
| Box Butte -----                         | 4        |
| Buffalo -----                           | 5        |
| Burt -----                              | 6        |
| Butler -----                            | 7        |
| Cass -----                              | 8        |
| Cedar-Dixon-Dakota-Thurston-Wayne ----- | 9        |
| Cheyenne-Kimball-Deuel -----            | 10       |
| Clay -----                              | 11       |
| Colfax -----                            | 12       |
| Cumming -----                           | 13       |
| Custer -----                            | 14       |
| Dawson -----                            | 15       |
| Dodge -----                             | 16       |
| Fillmore -----                          | 17       |
| Franklin -----                          | 18       |
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| Garden-Keith-Perkins -----              | 21       |
| Hall -----                              | 22       |
| Hamilton -----                          | 23       |
| Harlan -----                            | 24       |
| Holt & Northwest -----                  | 25       |
| Howard -----                            | 26       |
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| Johnson -----                           | 28       |
| Knox -----                              | 29       |
| Lancaster -----                         | 30       |
| Lincoln -----                           | 31       |
| Madison -----                           | 32       |
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| Washington -----                        | 51       |
| York -----                              | 52       |

\*—No county society.



| Name                        | Dist.<br>Code | Co.<br>Code | Name                        | Dist.<br>Code | Co.<br>Code | Name                       | Dist.<br>Code | Co.<br>Code |
|-----------------------------|---------------|-------------|-----------------------------|---------------|-------------|----------------------------|---------------|-------------|
| Abts, A. W. -----           | 1             | 37          | Bancroft, Paul -----        | 2             | 30          | Blair, Ralph L. -----      | 9             | 14          |
| 7906 Dodge, Omaha           |               |             | 1010 So. 34th, Lincoln      |               |             | Broken Bow                 |               |             |
| Adams, Gordon D. -----      | 4             | 32          | Bantin, Clarence -----      | 1             | 37          | Blattspieler, S. F. -----  | 11            | 31          |
| 900 Norfolk Ave., Norfolk   |               |             | 6858 Minne Lusa Blvd.,      |               |             | Colorado Springs, Colo.    |               |             |
| Adams, Leo M. -----         | 9             | 22          | Omaha                       |               |             | Bleicher, Jerome E. -----  | 1             | 37          |
| 1st Natl. Bank, Gr. Island  |               |             | Bare, James E. -----        | 1             | 37          | 2602 "J" St., Omaha        |               |             |
| Adkins, Nathan -----        | 1             | 37          | 120 W. 2nd, Papillion       |               |             | Block, D. M. -----         | 5             | 16          |
| 622 Doctors Bldg., Omaha    |               |             | Barkey, V. S. -----         | 2             | 30          | Arlington                  |               |             |
| Aftonomos, Lefkos -----     | 1             | 37          | 6330 Platte Ave., Lincoln   |               |             | Block, Dean M. -----       | 5             | 16          |
| 5404 Ames Ave., Omaha       |               |             | Barmore, John L. -----      | 1             | 37          | Arlington                  |               |             |
| Ahrens, Herbert G. -----    | 2             | 30          | 8601 W. Dodge Rd.,          |               |             | Blodig, John L. -----      | 1             | 37          |
| 339 N. Cotner, Lincoln      |               |             | Omaha                       |               |             | 2223 So. 85th Ave., Omaha  |               |             |
| Aita, John A. -----         | 1             | 37          | Barnwell, Robt. B. -----    | 12            | 47          | Blum, Henry -----          | 2             | 30          |
| 2302 No. 55th, Omaha        |               |             | 900 "N" St., Gering         |               |             | Rm. 2, Nebr. Theatre,      |               |             |
| Albee, Albert B. -----      | 11            | 21          | Barr, Carl C. -----         | 4             | 32          | Lincoln                    |               |             |
| Oshkosh                     |               |             | Tilden                      |               |             | Boelter, Wm. C. -----      | 1             | 37          |
| Albertson, L. C. -----      | 1             | 37          | Barr, Robert E. -----       | 4             | 32          | 534 Doctors Bldg., Omaha   |               |             |
| 4118 No. 78th, Omaha        |               |             | Tilden                      |               |             | Bogle, John H. -----       | 9             | 19          |
| Alcorn, Floyd -----         | 2             | 30          | Barry, M. W. -----          | 1             | 37          | Loup City                  |               |             |
| 2201 So. 11th, Lincoln      |               |             | 1416 Med. Arts, Omaha       |               |             | Bohi, Daniel G. -----      | 1             | 37          |
| Alderman, Allen -----       | 12            | 35          | Barry, Richard V. -----     | 1             | 37          | 534 Doctors Bldg., Omaha   |               |             |
| Chadron                     |               |             | 1519 So. 55th, Omaha        |               |             | Boler, Thos. D. (Life) --- | 1             | 37          |
| Allely, John R. -----       | 1             | 37          | Barta, Frank R. -----       | 1             | 37          | 420 So. 38th, Omaha        |               |             |
| 434 Doctors Bldg., Omaha    |               |             | 303 So. 56th St., Omaha     |               |             | Bonebrake, A. H. -----     | 2             | 38          |
| Allen, Dale R. -----        | 2             | 30          | Bartek, Julius G. -----     | 1             | 37          | Nebraska City              |               |             |
| 3560 So. 48th, Lincoln      |               |             | Bartek, Julius G. -----     | 1             | 37          | Borniwell, Chas. M. -----  | 1             | 37          |
| Allen, John F. (Life) ---   | 1             | 37          | 619 Barker Bldg., Omaha     |               |             | 8613 No. 30th, Omaha       |               |             |
| La Jolla, Calif.            |               |             | Barthell, John H. -----     | 2             | 30          | Booth, Richard -----       | 1             | 37          |
| Alilband, George T. -----   | 1             | 37          | 1012 Sharp Bldg., Lincoln   |               |             | St. Joseph's Hosp., Omaha  |               |             |
| 234 Doctors Bldg., Omaha    |               |             | Bartholow, George -----     | 1             | 37          | Borghoff, Joseph J. -----  | 1             | 37          |
| Allison, George J. -----    | 1             | 37          | Nebr. Psychiatric Inst.,    |               |             | 7906 Dodge, Omaha          |               |             |
| Ralston                     |               |             | Omaha                       |               |             | Bosley, Warren G. -----    | 9             | 22          |
| Althouse, I. G. -----       | 8             | 25          | Bass, Robert L. -----       | 5             | *           | 418 W. Division,           |               |             |
| Lynch                       |               |             | Genoa                       |               |             | Grand Island               |               |             |
| Amick, C. G. (Life) ---     | 9             | 14          | Batty, John L. -----        | 10            | 49          | Bottom, Paul -----         | 11            | 21          |
| Loup City                   |               |             | 310 W. 7th, McCook          |               |             | Ogallala                   |               |             |
| Andersen, Alfred C. -----   | 1             | 37          | Bauer, Lawrence W. -----    | 9             | 5           | Boykin, J. Melvin -----    | 2             | 30          |
| 4826½ So. 24th, Omaha       |               |             | 211 W. 33rd, Kearney        |               |             | V.A. Hospital, Lincoln     |               |             |
| Andersen, R. R. -----       | 2             | 8           | Baum, Cletus J. -----       | 1             | 37          | Bradley, Warren Q. -----   | 2             | 30          |
| Nehawka                     |               |             | 403 Center Bldg., Omaha     |               |             | 924 Sharp Bldg., Lincoln   |               |             |
| Anderson, A. B., Jr. -----  | 3             | 39          | Baumgartner, J. C. -----    | 1             | 37          | Brannen, Charles F. -----  | 1             | 37          |
| Pawnee City                 |               |             | 2533 So. 90th, Omaha        |               |             | 1901 Missouri Ave., Omaha  |               |             |
| Anderson, Arthur W. -----   | 10            | 1           | Beber, Meyer -----          | 1             | 37          | Brauer, Russell C. -----   | 2             | 30          |
| St. Hospital, Hastings      |               |             | 301 Doctors Bldg., Omaha    |               |             | 4150 South St., Lincoln    |               |             |
| Anderson, C. L. -----       | 6             | 43          | Bechtel, M. D. -----        | 9             | 22          | Brauer, S. H. -----        | 4             | 32          |
| Stromsburg                  |               |             | 1806 N. Cleburn, Gr. Island |               |             | Route 2, Norfolk           |               |             |
| Anderson, H. C. -----       | 9             | 22          | Becker, Wesley C. (Life) -- | 2             | 30          | Bray, R. E. -----          | 4             | 9           |
| Box 301, Grand Island       |               |             | 1501 So. 52nd, Lincoln      |               |             | Ponca                      |               |             |
| Anderson, H. F. -----       | 10            | 1           | Becker, Wm. F. -----        | 8             | 25          | Brazer, John G. -----      | 1             | 37          |
| 419 N. Burlington,          |               |             | In Service                  |               |             | 5114 Lafayette, Omaha      |               |             |
| Hastings                    |               |             | Beitenman, Edward T. -----  | 1             | 37          | Brendel, Richard F. -----  | 2             | 8           |
| Anderson, Harley E. -----   | 1             | 37          | Nebr. Psychiatric Inst.,    |               |             | Plattsmouth                |               |             |
| 5602 Davenport, Omaha       |               |             | Omaha                       |               |             | Brennan, L. V. -----       | 3             | 44          |
| Anderson, John S. -----     | 9             | 22          | Bell, C. D. -----           | 2             | 30          | Falls City                 |               |             |
| 1704 W. 2nd, Grand Island   |               |             | 413 Sharp Bldg., Lincoln    |               |             | Bressman, Charles M. ----- | 1             | 37          |
| Anderson, Lawrence L. ----- | 1             | 37          | Bell, James D. -----        | 6             | 52          | 8613 No. 30th, Omaha       |               |             |
| 1336 Med. Arts, Omaha       |               |             | York                        |               |             | Brett, Dale Edward -----   | 1             | 37          |
| Anderson, Leo E. -----      | 6             | 52          | Bell, J. S. -----           | 6             | 52          | 609 Doctors Bldg., Omaha   |               |             |
| Westfield, N. J.            |               |             | York                        |               |             | Brewster, Donald E. -----  | 10            | 40          |
| Anderson, R. C. -----       | 5             | 42          | Bence, Jackson J. -----     | 3             | 34          | Holdrege                   |               |             |
| 1359 26th Ave., Columbus    |               |             | Auburn                      |               |             | Brewster, F. Wayne -----   | 10            | 40          |
| Anderson, Robert C. -----   | 8             | 25          | Bendorf, D. H. -----        | 1             | 37          | Holdrege                   |               |             |
| Ainsworth                   |               |             | 5434 No. 42nd, Omaha        |               |             | Bridges, James -----       | 5             | 16          |
| Angle, Carol R. -----       | 1             | 37          | Bengtson, John W. -----     | 2             | 30          | 1835 E. Military, Fremont  |               |             |
| 418 So. 82nd, Omaha         |               |             | 3145 "O" St., Lincoln       |               |             | Brill, I. William -----    | 2             | 30          |
| Angle, E. E. -----          | 2             | 30          | Bennett, Wilbur Keith ---   | 10            | 1           | Student Health Center,     |               |             |
| 3705 South St., Lincoln     |               |             | Red Cloud                   |               |             | U. of N., Lincoln          |               |             |
| Angle, William D. -----     | 1             | 37          | Benthack, Robt. B. -----    | 4             | 9           | Brillhart, E. G. -----     | 5             | 42          |
| 418 So. 82nd, Omaha         |               |             | Wayne                       |               |             | Box 568, Columbus          |               |             |
| Antony, Arthur C. -----     | 1             | 37          | Benthack, Walter -----      | 4             | 9           | Brinkman, H. H. -----      | 1             | 37          |
| 5715 Military Ave., Omaha   |               |             | Wayne                       |               |             | 5519 Military Ave., Omaha  |               |             |
| Armbrust, Walter -----      | 1             | 37          | Bentley, Neil B. -----      | 10            | 49          | Brodkey, M. H. -----       | 1             | 37          |
| 5401 Leavenworth, Omaha     |               |             | Oxford                      |               |             | 320 Med Arts, Omaha        |               |             |
| Arnholt, M. F. (Life) ----- | 2             | 30          | Beran, Russell E. -----     | 1             | 37          | Brody, Alfred W. -----     | 1             | 37          |
| 3421 "O" St., Lincoln       |               |             | 3610 Dodge, Omaha           |               |             | Creighton Univ. School     |               |             |
| Arnold, C. H. (Life) -----  | 2             | 30          | Berenkey, Kornel M. -----   | 1             | 37          | Medicine, Omaha            |               |             |
| 2480 Lake St., Lincoln      |               |             | Creighton Univ., Omaha      |               |             | Brolsma, M. P. -----       | 2             | 30          |
| Arrasmith, K. Don -----     | 1             | 37          | Berrick, Wm. H. -----       | 4             | 32          | 435 So. 16th, Lincoln      |               |             |
| 3610 Dodge, Omaha           |               |             | Madison                     |               |             | Brooks, E. B. -----        | 2             | 30          |
| Ashby, A. A. -----          | 7             | 17          | Best, R. Russell -----      | 1             | 37          | 2323 So. 22nd, Lincoln     |               |             |
| Geneva                      |               |             | 609 Doctors Bldg., Omaha    |               |             | Brooks, Robert -----       | 2             | 30          |
| Ashby, Chas. F. -----       | 7             | 17          | Best, Robert -----          | 10            | 40          | 1403 Sharp Bldg., Lincoln  |               |             |
| Geneva                      |               |             | Holdrege                    |               |             | Brott, Clarence R. -----   | 3             | 20          |
| Austria, G. O. -----        | 1             | 37          | Bevilacqua, Lee C. -----    | 1             | 37          | 109½ So. 6th, Beatrice     |               |             |
| 2321 "M" St., Omaha         |               |             | 4105 Harrison, Omaha        |               |             | Brown, A. R. -----         | 6             | 52          |
| Ayres, Maurice J. -----     | 9             | 15          | Bierbower, R. L. -----      | 6             | 43          | Memphis, Tenn.             |               |             |
| Gothenburg                  |               |             | Shelby                      |               |             | Brown, Arthur C. -----     | 1             | 37          |
| Baca, D. E. -----           | 1             | 37          | Billerbeck, Henry J. -----  | 4             | 9           | St. Catherine's Hosp.,     |               |             |
| 2580 So. 90th, Omaha        |               |             | Randolph                    |               |             | Omaha                      |               |             |
| Bach, Stanley -----         | 1             | 37          | Bisgard, J. Dewey -----     | 1             | 37          | Brown, John A. III -----   | 2             | 30          |
| 625 Doctors Bldg., Omaha    |               |             | 542 Doctors Bldg., Omaha    |               |             | 1620 "M" St., Lincoln      |               |             |
| Bagby, Kenneth C. -----     | 5             | 51          | Bishop, Ben -----           | 12            | 35          | Brown, R. -----            | 3             | 20          |
| Blair                       |               |             | Crawford                    |               |             | 109 So. 6th, Beatrice      |               |             |
| Baker, Ellis E. -----       | 12            | 47          | Bitner, Chris -----         | 12            | 10          | Brown, W. O. -----         | 12            | 47          |
| 1624 Ave. "A," Scottsbluff  |               |             | Sidney                      |               |             | 1801 Broadway, Scottsbluff |               |             |
| Baker, Paul Q. -----        | 12            | 47          | Bitner, Mary S. -----       | 5             | 43          | Browne, Kenneth M. -----   | 1             | 37          |
| 1624 Ave. "A," Scottsbluff  |               |             | State Capitol, Lincoln      |               |             | 924 Med. Arts, Omaha       |               |             |
| Baldwin, John D. -----      | 2             | 30          | Bivens, Wm. S. -----        | 10            | 40          | Brugh, E. A. -----         | 9             | 22          |
| 930 Stuart Bldg., Lincoln   |               |             | Holdrege                    |               |             | 323 W. Koenig,             |               |             |
| Ballew, John W. -----       | 2             | 30          | Black, Albert S., Jr. ----- | 1             | 37          | Grand Island               |               |             |
| 1701 "K" St., Lincoln       |               |             | 1414 Med. Arts, Omaha       |               |             | Brush, John H. -----       | 1             | 37          |
| Bancroft, B. R. -----       | 9             | 5           | Black, Paul (Life) -----    | 2             | 30          | 1329 Medical Arts, Omaha   |               |             |
| Kearney Med. Arts,          |               |             | 147 No. 9th, Lincoln        |               |             | Bucholz, Donald -----      | 1             | 37          |
| Kearney                     |               |             | Blackstone, Herbert -----   | 12            | 47          | 3610 Dodge, Omaha          |               |             |
|                             |               |             | Bridgeport                  |               |             |                            |               |             |

| Name                         | Dist.<br>Code | Co.<br>Code | Name                          | Dist.<br>Code | Co.<br>Code | Name                         | Dist.<br>Code | Co.<br>Code |
|------------------------------|---------------|-------------|-------------------------------|---------------|-------------|------------------------------|---------------|-------------|
| Bunting, L. G. -----         | 7             | 50          | Claussen, Bruce E. -----      | 11            | 31          | Dean, Earl J. -----          | 10            | 1           |
| Hebron                       |               |             | 321 E. "B" St.,               |               |             | 708 Eastside Blvd., Hastings |               |             |
| Bunting, Richard -----       | 1             | 37          | North Platte                  |               |             | Dean G. W. -----             | 2             | 30          |
| Clarkson Hosp., Omaha        |               |             | Cleaver, Edgar M. -----       | 1             | 37          | 817 So. 27th, Lincoln        |               |             |
| Burbridge, Glen E. -----     | 2             | 38          | 6104½ Military, Omaha         |               |             | DeBacker, L. J. (Life) ----- | 10            | 1           |
| Nebraska City                |               |             | Clemens, Richard P. -----     | 1             | 37          | 201 Gaston Bldg., Hastings   |               |             |
| Burghart, Robert L. -----    | 3             | 44          | 7324 Maple, Omaha             |               |             | Decker, R. F. (Life) -----   | 7             | 50          |
| Falls City                   |               |             | Clothier John G. -----        | 2             | 30          | Byron                        |               |             |
| Burney, Dwight, Jr. -----    | 1             | 37          | V.A. Hospital, Lincoln        |               |             | DeFlon, Eric G. -----        | 8             | 35          |
| 609 Doctors Bldg., Omaha     |               |             | Clyne, John C. -----          | 2             | 30          | Chadron                      |               |             |
| Burnham, Arnold G. -----     | 12            | 4           | Plaza Med. Bldg.,             |               |             | DeLanney, L. A. ((Life) --   | 1             | 37          |
| 524 Box Butte Ave.,          |               |             | 339 No. Cotner, Lincoln       |               |             | Walnut Creek, Calif.         |               |             |
| Alliance                     |               |             | Cochran, Robert M. -----      | 1             | 37          | DeMay, Richard F. -----      | 9             | 22          |
| Burns, B. C., Sr. -----      | 1             | 37          | 452 Aquila Ct., Omaha         |               |             | 721 W. 7th, Grand Island     |               |             |
| 421 Farm Credit Bldg.,       |               |             | Coe, C. M. -----              | 4             | 9           | Dendinger, Wm. -----         | 1             | 37          |
| Omaha                        |               |             | Wakefield                     |               |             | 402 Aquila Ct., Omaha        |               |             |
| Burns, B. C., Jr. -----      | 1             | 37          | Coe, John D. -----            | 1             | 37          | Denker, John C. -----        | 1             | 37          |
| 407 So. 86th, Omaha          |               |             | 409 Doctors Bldg., Omaha      |               |             | Valley                       |               |             |
| Burns, Robert I. -----       | 5             | 42          | Cole, Frank -----             | 2             | 30          | Deppen, E. N. -----          | 2             | 30          |
| 135 E. Parkway, Columbus     |               |             | Coleman, F. D. -----          | 2             | 30          | 1500 "P" St., Lincoln        |               |             |
| Burwell, J. R. -----         | 11            | 21          | 3050 Stratford, Lincoln       |               |             | Deubler, Keith F. -----      | 2             | 30          |
| Ogallala                     |               |             | Colon, V. Franklin -----      | 7             | 45          | (Service)                    |               |             |
| Butler, Robert E. -----      | 9             | 5           | Friend                        |               |             | Ft. Riley, Kansas            |               |             |
| Minden                       |               |             | Colglazier, Ernest -----      | 11            | 21          | Devers, W. I. -----          | 4             | 41          |
| Cain, Jerome A. -----        | 2             | 30          | Grant                         |               |             | Pierce                       |               |             |
| 1550 So. 17th, Lincoln       |               |             | Comine, J. J. -----           | 1             | 37          | DeVol, Russell A. -----      | 11            | 31          |
| Calkins, Robert C. -----     | 12            | 10          | 412 Med Arts, Omaha           |               |             | Box 738, North Platte        |               |             |
| Kimball                      |               |             | Connolly, E. A. -----         | 1             | 37          | Dewey, F. G. (Life) -----    | 4             | 9           |
| Calvert, John H. -----       | 4             | 41          | 502 Med Arts, Omaha           |               |             | Coleridge                    |               |             |
| Pierce                       |               |             | Connor, P. James -----        | 1             | 37          | Dewey, John L. -----         | 1             | 37          |
| Calvert, Thomas D. -----     | 2             | 30          | 628 Med. Arts, Omaha          |               |             | 104 So. 39th, Omaha          |               |             |
| 800 So. 13th, Lincoln        |               |             | Connors, E. K. -----          | 1             | 37          | Deyke, Vern F. -----         | 5             | 42          |
| Cameron, O. J. -----         | 1             | 37          | 317 Doctors Bldg. Omaha       |               |             | Box 568, Columbus            |               |             |
| 1520 Med. Arts, Omaha        |               |             | Couwell, George D. -----      | 4             | 32          | Dickerson, William -----     | 1             | 37          |
| Campbell, John -----         | 5             | 33          | 509 Norfolk Ave., Norfolk     |               |             | 3610 Dodge, Omaha            |               |             |
| Central City                 |               |             | Cook, Hull -----              | 12            | 10          | Dickinson, L. E., Jr. -----  | 10            | 49          |
| Campbell, John F. -----      | 9             | 22          | Sidney                        |               |             | 114 E. "C" St., McCook       |               |             |
| 702 W. Koenig, Gr. Island    |               |             | Cook, Lyman J. (Life) -----   | 1             | 37          | Dietz, Robert J. -----       | 2             | 8           |
| Cambell, Stuart D. -----     | 12            | 47          | 1612 Med. Arts, Omaha         |               |             | Plattsmouth                  |               |             |
| 3639 Ave. B, Scottsbluff     |               |             | Cooper, George -----          | 11            | 31          | Dinsmore, James -----        | 1             | 37          |
| Campbell, W. Allen -----     | 2             | 30          | 501 So. Jeffers, No. Platte   |               |             | 209 So. 42nd, Omaha          |               |             |
| 1321 Sharp Bldg., Lincoln    |               |             | Core, Edwin R. -----          | 12            | 10          | Doering, William -----       | 10            | 18          |
| Carignan, Chas., Jr. -----   | 9             | 5           | Kimball                       |               |             | Franklin                     |               |             |
| Ravenna                      |               |             | Cornelius, C. J. -----        | 12            | 10          | Donahue, Francis D. -----    | 1             | 37          |
| Carlson, C. R. -----         | 10            | 49          | Sidney                        |               |             | 1204 Med. Arts, Omaha        |               |             |
| Wauneta                      |               |             | Cotton, Walter T. -----       | 1             | 37          | Donaldson, J. H., Jr. -----  | 10            | 49          |
| Carlson, Emery W. -----      | 4             | 32          | 834 Doctors Bldg., Omaha      |               |             | 602-604 Norris Ave.,         |               |             |
| Newman Grove                 |               |             | Courshon, A. J. (Life) -----  | 12            | 35          | McCook                       |               |             |
| Carlson, James -----         | 4             | 29          | Chadron                       |               |             | Donelan, James P. -----      | 1             | 37          |
| Verdigré                     |               |             | Courtney, J. E. -----         | 1             | 37          | Guarantee Mutual Life        |               |             |
| Carnazzo, S. J. -----        | 1             | 37          | 730 City Natl. Bank,          |               |             | Ins., Omaha                  |               |             |
| 723 Barker Bldg., Omaha      |               |             | Omaha                         |               |             | Donelan, James S. -----      | 1             | 37          |
| Carp, Oscar -----            | 1             | 37          | Covey, George W. -----        | 2             | 30          | 8601 W. Dodge Rd.,           |               |             |
| 515 Med. Arts, Omaha         |               |             | 2500 Jackson Dr., Lincoln     |               |             | Omaha                        |               |             |
| Carr, J. W. -----            | 6             | 48          | Cowan, S. D. (Life) -----     | 3             | 44          | Donovan, James M. -----      | 1             | 37          |
| Seward                       |               |             | Falls City                    |               |             | 4815 Dodge, Omaha            |               |             |
| Carroll, R. P. -----         | 4             | 9           | Cox, Roger -----              | 4             | 13          | Doolittle, H. H. -----       | 1             | 37          |
| Laurel                       |               |             | West Point                    |               |             | 2580 So. 90th, Omaha         |               |             |
| Carson, Jim S. -----         | 6             | 43          | Cram, Roy S. -----            | 9             | 19          | Dorwart, Clinton B. -----    | 12            | 10          |
| 310 W. 7th, McCook           |               |             | Burwell                       |               |             | Sidney                       |               |             |
| Carstens, George J. -----    | 8             | 25          | Crawford, Mark E. -----       | 2             | 30          | Douglas, R. R. -----         | 5             | 33          |
| O'Neill                      |               |             | 939 Stuart Bldg., Lincoln     |               |             | Clarks                       |               |             |
| Carter, James G. -----       | 1             | 37          | Crofoot Michael -----         | 1             | 37          | Dowell, D. A. -----          | 1             | 37          |
| 8601 W. Dodge Rd.,           |               |             | 542 Doctors Bldg., Omaha      |               |             | 816 Med. Arts, Omaha         |               |             |
| Omaha                        |               |             | Crotty, Richard Q. -----      | 1             | 37          | Drdla, Theodore -----        | 1             | 37          |
| Carveth, Stephen W. -----    | 2             | 30          | 634 Doctors Bldg., Omaha      |               |             | 460 Aquila Ct., Omaha        |               |             |
| 1013 Sharp Bldg., Lincoln    |               |             | Crum, H. V. -----             | 8             | 35          | Drozda, Jos. P. -----        | 1             | 37          |
| Carveth, W. W. -----         | 2             | 30          | Rushville                     |               |             | 1315 Deer Park Rd.,          |               |             |
| 626 Sharp Bldg., Lincoln     |               |             | Cuka, Dennis J. -----         | 2             | 30          | Omaha                        |               |             |
| Cassel, R. L. -----          | 7             | 27          | 1735 So. 29th, Lincoln        |               |             | Dunlap, James -----          | 1             | 37          |
| Fairbury                     |               |             | Currey, John R. -----         | 2             | 30          | 721 Medical Arts, Omaha      |               |             |
| Cassidy, W. A. -----         | 1             | 37          | 1033 Stuart Bldg., Lincoln    |               |             | Dunlap, James H. -----       | 4             | 32          |
| 200 No. 55th, Omaha          |               |             | Curtis, E. E. (Life) -----    | 4             | 2           | 1112 Verges, Norfolk         |               |             |
| Catania, Nancy -----         | 1             | 37          | Neligh                        |               |             | Dunn, D. E. -----            | 1             | 37          |
| 820 Med. Arts, Omaha         |               |             | Curtiss, Charles P. -----     | 9             | 5           | 8053 Blondo Plaza, Omaha     |               |             |
| Chadek, L. J. -----          | 4             | 13          | 7 W. 31st, Kearney            |               |             | Dunn, F. Lowell -----        | 1             | 37          |
| West Point                   |               |             | Dahlheim, Harold -----        | 4             | 32          | 847 Fairacres Rd., Omaha     |               |             |
| Chaloupka, M. L. -----       | 9             | 5           | 100 No. 13th, Norfolk         |               |             | Dutch, Stephen J., Jr. ----- | 1             | 37          |
| Callaway                     |               |             | Dalton, Kenneth R. -----      | 5             | *           | Nebr. Psychiatric Inst.,     |               |             |
| Chapp, John D. -----         | 3             | 20          | Genoa                         |               |             | Omaha                        |               |             |
| 821 No. 13th, Beatrice       |               |             | David, Joseph, Jr. -----      | 4             | 32          | Dworak, Henry L. -----       | 1             | 37          |
| Chappell, E. R. -----        | 9             | 5           | 1109 Norfolk Ave., Norfolk    |               |             | 503 Center Bldg. Omaha       |               |             |
| Minden                       |               |             | Davies, Dale H. -----         | 5             | 16          | Dyer, Jasper L. -----        | 5             | 16          |
| Charlton, G. E. (Life) ----- | 4             | 32          | 450 E. 23rd, Fremont          |               |             | 1508 So. 79th, Omaha         |               |             |
| Colorado Springs, Colo.      |               |             | Davies, L. T. -----           | 2             | 30          | Eagle, Frank L. -----        | 1             | 37          |
| Charlton, George P. -----    | 10            | 1           | 816 Sharp Bldg., Lincoln      |               |             | 1620 Med. Arts, Omaha        |               |             |
| 12th St. and Baltimore       |               |             | Davis, Allan -----            | 1             | 37          | Easley, John H. -----        | 9             | 22          |
| Ave., Hastings               |               |             | 422 Doctors Bldg., Omaha      |               |             | 220 Hedde Bldg., Gr. Island  |               |             |
| Chase, Robert C. -----       | 11            | 21          | Davis, Herbert H. (Life) --   | 1             | 37          | Eaton, Louise -----          | 1             | 37          |
| Ogallala                     |               |             | Box 1411, Peony Park          |               |             | Nebr. Psychiatric Inst.,     |               |             |
| Cherry L. D. -----           | 2             | 30          | Station, Omaha                |               |             | Omaha                        |               |             |
| 921 Stuart Bldg., Lincoln    |               |             | Davis, Homer (Life) -----     | 5             | *           | Eaton, Merrill T. -----      | 1             | 37          |
| Chick, Nicholas -----        | 11            | 31          | Genoa                         |               |             | Nebr. Psychiatric Inst.,     |               |             |
| 112 No. Dewey,               |               |             | Davis, J. Calvin (Life) ----- | 1             | 37          | Omaha                        |               |             |
| North Platte                 |               |             | 425 Aquila Ct., Omaha         |               |             | Eaton, William B. -----      | 5             | 16          |
| Chleborad, Wm. J. -----      | 5             | 16          | Davis, J. Calvin, III -----   | 1             | 37          | 204 IOOF Bldg., Fremont      |               |             |
| 1501 N. Hancock, Fremont     |               |             | 325 Doctors Bldg., Omaha      |               |             | Eberle, Donald -----         | 11            | 21          |
| Christensen, J. B. -----     | 1             | 37          | Davis, John Byron -----       | 1             | 37          | Ogallala                     |               |             |
| 1329 Med. Arts, Omaha        |               |             | 734 Doctors Bldg., Omaha      |               |             | Ebers, Dale W. -----         | 2             | 30          |
| Christlieb, J. M. -----      | 1             | 37          | Davis, Neal -----             | 1             | 37          | 800 So. 13th, Lincoln        |               |             |
| 7021 Bellevue Blvd., Omaha   |               |             | 416 So. 93rd, Omaha           |               |             | Egan, Richard L. -----       | 1             | 37          |
| Clark, W. M. -----           | 1             | 37          | Deakin, Thos. W. -----        | 8             | 25          | Creighton Univ. School       |               |             |
| 1113 Redick Tower, Omaha     |               |             | Valentine                     |               |             | of Medicine, Omaha           |               |             |



| Name                         | Dist. Code | Co. Code | Name                        | Dist. Code | Co. Code | Name                         | Dist. Code | Co. Code |
|------------------------------|------------|----------|-----------------------------|------------|----------|------------------------------|------------|----------|
| Egan, William J. -----       | 1          | 37       | Footo, D. B. -----          | 10         | 1        | Gilligan, J. P. -----        | 2          | 38       |
| 456 Aquila Ct., Omaha        |            |          | 422 No. Hastings Ave.,      |            |          | Nebraska City                |            |          |
| Ehrlich, Robert W. -----     | 2          | 30       | Hastings                    |            |          | Gillisple, James (Life) ---- | 3          | 44       |
| 816 Sharp Bldg., Lincoln     |            |          | Footo, E. C. (Life) -----   | 10         | 1        | Falls City                   |            |          |
| Ekeler, Louis J. -----       | 6          | 7        | 422 No. Hastings Ave.,      |            |          | Gilloon, Allan G. -----      | 9          | 22       |
| David City                   |            |          | Hastings                    |            |          | 1802 N. Cleburn,             |            |          |
| Eklund, H. S. -----          | 6          | 43       | Formanack, C. J. -----      | 2          | 38       | Grand Island                 |            |          |
| Osceola                      |            |          | Syracuse                    |            |          | Gleeson, John J. (Life) ---- | 1          | 37       |
| Elias, H. F. -----           | 3          | 20       | Forney, L. W. -----         | 7          | 45       | 2307 So. 33rd, Omaha         |            |          |
| 1200 So. 9th, Beatrice       |            |          | Crete                       |            |          | Glenn, Elmer E. -----        | 10         | 1        |
| Elliott, Helen E. -----      | 12         | 47       | Foster, Miles E. Jr. -----  | 1          | 37       | 620 N. Denver Ave.,          |            |          |
| 2805 6th Ave., Scottsbluff   |            |          | Sycamore Farm, Waterloo     |            |          | Hastings                     |            |          |
| Elston, Harry R. -----       | 1          | 37       | Fowler, W. Gerald -----     | 7          | 45       | Glenn, William V. -----      | 3          | 44       |
| 4930 So. 24th, Omaha         |            |          | DeWitt                      |            |          | Falls City                   |            |          |
| Elston, James H. -----       | 1          | 37       | Fox, Robert J. -----        | 9          | 19       | Glow, Donald Thomas -----    | 1          | 37       |
| 1107 Med. Arts, Omaha        |            |          | Spalding                    |            |          | 3925 Dewey, Omaha            |            |          |
| Emerson, C. (Life) -----     | 2          | 30       | Francis, Gordon D. -----    | 10         | 49       | Goehring, Walter -----       | 5          | 51       |
| 1909 So. 33rd, Lincoln       |            |          | Arapahoe                    |            |          | Blair                        |            |          |
| Endres, G. L. -----          | 1          | 37       | Francis, Marvin B. -----    | 1          | 37       | Goetowski, Paul -----        | 2          | 30       |
| 5815 Ohio, Omaha             |            |          | Bellevue                    |            |          | 1000 So. 13th, Lincoln       |            |          |
| Engdahl, Wallace E. -----    | 1          | 37       | Frank, Carl L. -----        | 12         | 47       | Gogela, Louis J. -----       | 2          | 30       |
| 8613 No. 30th, Omaha         |            |          | 1624 Ave. "A," Scottsbluff  |            |          | 1318 Sharp Bldg., Lincoln    |            |          |
| Epp, M. J. -----             | 2          | 30       | Frank, Muriel N. -----      | 1          | 37       | Goodrich, Guy W. -----       | 1          | 37       |
| 1108 Sharp Bldg., Lincoln    |            |          | Methodist Hosp., Omaha      |            |          | 1197 So. 79th, Omaha         |            |          |
| Ericson, L. L. -----         | 4          | 13       | Frans, James R. -----       | 6          | 48       | Gorthey, Russell L. -----    | 2          | 30       |
| West Point                   |            |          | Milford                     |            |          | 3440 "O" St., Lincoln        |            |          |
| Ewing, Eugene -----          | 4          | 32       | Frazer, M. D. -----         | 2          | 30       | Gouldman, Carl -----         | 10         | 1        |
| Madison                      |            |          | Bryan Memorial Hosp.,       |            |          | Box 240, Hastings            |            |          |
| Ewing, John D. -----         | 1          | 37       | Lincoln                     |            |          | (Ingleside)                  |            |          |
| 1622 Med. Arts, Omaha        |            |          | Freed, Albert E. -----      | 1          | 37       | Grace, Leslie I. -----       | 5          | 51       |
| Faier, Robt. G. -----        | 1          | 37       | 8019 W. Dodge Rd., Omaha    |            |          | Blair                        |            |          |
| 1528 Med. Arts, Omaha        |            |          | French, Ivan M. -----       | 6          | 46       | Graham, Hamlin -----         | 2          | 30       |
| Fairbanks, Wendell -----     | 3          | 34       | Wahoo                       |            |          | 1000 So. 13th, Lincoln       |            |          |
| Auburn                       |            |          | Frerichs, C. T. -----       | 3          | 20       | Graham, W. W. -----          | 4          | 2        |
| Falloon, Frank -----         | 7          | 27       | 114 So. 6th, Beatrice       |            |          | Elgin                        |            |          |
| Fairbury                     |            |          | Friedlander, Milton -----   | 1          | 37       | Graham, William E. -----     | 1          | 37       |
| Fangman, Richard J. -----    | 1          | 37       | New Rochelle, N.Y.          |            |          | 8721 Shamrock Rd., Omaha     |            |          |
| 5002 Dodge, Omaha            |            |          | Friesen Harold F. -----     | 6          | 52       | Grant, Robert S. -----       | 2          | 30       |
| Farmer, Wm. -----            | 3          | 44       | Henderson                   |            |          | 48th and "A" St., Lincoln    |            |          |
| Falls City                   |            |          | Fritsch, John H. -----      | 2          | 30       | Graupner, G. W. -----        | 9          | 22       |
| Farner, B. R. -----          | 4          | 32       | 3145 "O" St., Lincoln       |            |          | 217½ No. Pine, Gr. Island    |            |          |
| 900 Norfolk Ave., Norfolk    |            |          | Frost, Dwight W. -----      | 1          | 37       | Graves, Harris B. -----      | 1          | 37       |
| Farner, John E. -----        | 8          | 25       | 3240 Maplewood Blvd.,       |            |          | 434 Doctors Bldg., Omaha     |            |          |
| Valentine                    |            |          | Omaha                       |            |          | Gray, Richard W. -----       | 2          | 30       |
| Farrell, Chester H. -----    | 1          | 37       | Fuenning, S. I. -----       | 2          | 30       | 2501 Rathbone Rd.,           |            |          |
| 721 Med. Arts, Omaha         |            |          | 5100 Grandview Lane,        |            |          | Lincoln                      |            |          |
| Farrell, Robert F. (Life) -- | 1          | 37       | Lincoln                     |            |          | Green, Carl R. -----         | 4          | 29       |
| San Francisco, Calif.        |            |          | Fuhrman, Jerry -----        | 12         | 47       | Creighton                    |            |          |
| Fellman, A. C. -----         | 1          | 37       | 900 "N," Gering             |            |          | Greenberg, A. (Life) -----   | 1          | 37       |
| 309 Doctors Bldg., Omaha     |            |          | Gardiner, J. F. -----       | 1          | 37       | 320 Med. Arts, Omaha         |            |          |
| Fellows, Chas. E. -----      | 1          | 37       | 628 Med. Arts, Omaha        |            |          | Greenberg, Ben -----         | 6          | 52       |
| Millard Shop. Center,        |            |          | Gardner, Joseph H. -----    | 12         | 4        | York                         |            |          |
| Millard                      |            |          | 202 W. 3rd, Alliance        |            |          | Greenberg, M. M. -----       | 1          | 37       |
| Fencl, Howard -----          | 5          | 12       | Garlinghouse, R. E. -----   | 2          | 30       | 1421 Dodge, Omaha            |            |          |
| Schuyler                     |            |          | 140 So. 27th, Lincoln       |            |          | Greenberg, Richard S. -----  | 1          | 37       |
| Fenstermacher, R. C. -----   | 2          | 38       | Garlinghouse, R. O. -----   | 2          | 30       | 1421 Dodge, Omaha            |            |          |
| Nebraska City                |            |          | Gartner, Lee D. -----       | 2          | 30       | Greene, Arthur M. -----      | 1          | 37       |
| Fenton, Bryan C. T. -----    | 2          | 30       | 921 Stuart Bldg., Lincoln   |            |          | 501 Doctors Bldg., Omaha     |            |          |
| Chicago, Ill.                |            |          | Gately, H. S. -----         | 2          | 38       | Greene, Earl G. -----        | 1          | 37       |
| Ferciot, C. Fred -----       | 2          | 30       | Syracuse                    |            |          | 3703 Mormon, Omaha           |            |          |
| 1000 So. 13th, Lincoln       |            |          | Gatewood, John W. -----     | 1          | 37       | Gridley, L. J. -----         | 12         | 47       |
| Fieber, Warren W. -----      | 1          | 37       | 8601 W. Dodge Rd., Omaha    |            |          | 214-16 W. 27th, Scottsbluff  |            |          |
| Univ. of Nebr., Omaha        |            |          | Gedgoud, John L. -----      | 1          | 37       | Grier, John J. -----         | 1          | 37       |
| Fijan, Kenneth J. -----      | 2          | 30       | 3925 Dewey, Omaha           |            |          | 1107 Med Arts, Omaha         |            |          |
| 3145 "O" St., Lincoln        |            |          | Geer, Robert R. -----       | 9          | 22       | Grier, M. E. -----           | 1          | 37       |
| Filip, Alexander J. -----    | 9          | 22       | 105 N. Eddy, Gr. Island     |            |          | 828 Med. Arts, Omaha         |            |          |
| 704 W. 1st, Grand Island     |            |          | Gentry, Harold, Jr. -----   | 12         | 47       | Grier, Thomas -----          | 1          | 37       |
| Filkins, John C. -----       | 1          | 37       | 1720 10th, Gering           |            |          | 828 Med. Arts, Omaha         |            |          |
| 521 Doctors Bldg., Omaha     |            |          | Gentry, Richard D. -----    | 3          | 44       | Griffin, Wm. T. -----        | 2          | 30       |
| Finegan, John C. -----       | 9          | 15       | Falls City                  |            |          | 1405 Sharp Bldg., Lincoln    |            |          |
| Lexington                    |            |          | Gentry, W. Max -----        | 12         | 47       | Griot, A. J. (Life) -----    | 8          | 35       |
| Finkner, John R. -----       | 10         | 1        | 1720 10th, Gering           |            |          | Chadron                      |            |          |
| Minden                       |            |          | Gentry, William J. -----    | 12         | 47       | Grissom, Robert L. -----     | 1          | 37       |
| Finlayson, Alister I. -----  | 1          | 37       | 1720 10th, Gering           |            |          | U. of N. College             |            |          |
| 924 Med Arts, Omaha          |            |          | George, John H. -----       | 1          | 37       | of Medicine, Omaha           |            |          |
| Finney, Lawrence -----       | 2          | 30       | 410 S. Saddle Cr. Rd.,      |            |          | Gross, Charles G. -----      | 10         | 49       |
| 323 So. 14th, Lincoln        |            |          | Omaha                       |            |          | V.A., Hospital, Lincoln      |            |          |
| Fischer, Rex R. -----        | 5          | 42       | Getscher, Phillip E. -----  | 2          | 30       | Gross, Joseph F. -----       | 1          | 37       |
| Columbus Clinic, Columbus    |            |          | 306 Sharp Bldg., Lincoln    |            |          | 1307 Med. Arts, Omaha        |            |          |
| Fisher, Eugene -----         | 1          | 37       | Getty, Robert F. -----      | 11         | 31       | Guildner, C. Wayne -----     | 10         | 1        |
| 9006 Ohio, Omaha             |            |          | 501 So. Jeffers,            |            |          | 131 N. Hastings Ave.,        |            |          |
| Fitch, Donald Max -----      | 1          | 37       | North Platte                |            |          | Hastings                     |            |          |
| U. of N., College            |            |          | Gibbs, Gordon -----         | 1          | 37       | Gurnett, Thomas J. -----     | 1          | 37       |
| of Medicine, Omaha           |            |          | U. of N. College of         |            |          | 527 Med. Arts, Omaha         |            |          |
| Fitzgerald, Thomas D. -----  | 12         | 4        | Med., Omaha                 |            |          | Gutch, C. F. -----           | 3          | 20       |
| 202 W. 3rd, Alliance         |            |          | Gibson, L. V. -----         | 2          | 30       | V.A. Hospital, Lincoln       |            |          |
| Fitzgibbons, Robert J. ----- | 1          | 37       | 1923 Pawnee, Lincoln        |            |          | Hachiya, Keay -----          | 2          | 30       |
| 1412 Med. Arts, Omaha        |            |          | Giffen, Horace K. -----     | 1          | 37       | 3910 Stockwell, Lincoln      |            |          |
| Fitzmaurice, Francis -----   | 1          | 37       | 432 So. 39th St., Omaha     |            |          | Hadley, Clifford M. -----    | 6          | 43       |
| 2820 So. 32nd Ave.,          |            |          | Gifford, Harold, Jr. -----  | 1          | 37       | Osceola                      |            |          |
| Omaha                        |            |          | 1620 Med. Arts, Omaha       |            |          | Haller, Michael -----        | 1          | 37       |
| Flansburg, H. E. -----       | 2          | 30       | Gilbert, Louis W. -----     | 2          | 30       | 4105 Harrison, Omaha         |            |          |
| 1103 Sharp Bldg., Lincoln    |            |          | Giles, Wm. F. -----         | 1          | 37       | Hallgrimson, Paul J. -----   | 7          | 36       |
| Fleishman, Max -----         | 1          | 37       | 915 Med. Arts, Omaha        |            |          | Superior                     |            |          |
| 260 Aquila Ct., Omaha        |            |          | Gilg, A. Dean -----         | 8          | 25       | Hamilton, Clif S. -----      | 1          | 37       |
| Fleming, Edward F. -----     | 1          | 37       | Bassett                     |            |          | 525 Doctors Bldg., Omaha     |            |          |
| 3650 Burt St., Omaha         |            |          | Gillespie, Patrick C. ----- | 3          | 20       | Hamilton, Frank T. (Life) -- | 7          | 45       |
| Floyd, John L. -----         | 12         | 47       | 1110 No. 10th, Beatrice     |            |          | Friend                       |            |          |
| St. Mary Hosp., Scottsbluff  |            |          | Gillespie, Robert W. -----  | 2          | 30       | Hamsa, W. R. -----           | 1          | 37       |
| Foley, John F. -----         | 1          | 37       | 500 So. 17th St., Lincoln   |            |          | 609 Doctors Bldg., Omaha     |            |          |
| Univ. Hosp., Omaha           |            |          | Gillies, R. O., Jr. -----   | 1          | 37       | Hanigan, J. J. -----         | 2          | 30       |
| Footo, C. M. -----           | 10         | 1        | 631 Med. Arts, Omaha        |            |          | 1700 So. 24th, Lincoln       |            |          |
| 422 No. Hastings Ave.,       |            |          |                             |            |          | Hanisch, E. C. -----         | 9          | 26       |
| Hastings                     |            |          |                             |            |          | St. Paul                     |            |          |



| Name                          | Dist. Code | Co. Code | Name                        | Dist. Code | Co. Code | Name                            | Dist. Code | Co. Code |
|-------------------------------|------------|----------|-----------------------------|------------|----------|---------------------------------|------------|----------|
| Hanisch, Louis E. -----       | 1          | 37       | Hession, John F. -----      | 1          | 37       | Hyde, John R. -----             | 1          | 37       |
| 320 Doctors Bldg., Omaha      |            |          | 7324 Maple, Omaha           |            |          | 540 Center Bldg., Omaha         |            |          |
| Hanisch, Richard -----        | 9          | 26       | Heumann, J. M. F. (Life) -- | 1          | 37       | Imes, Loren E. -----            | 9          | 22       |
| St. Paul                      |            |          | 6110 Military Ave., Omaha   |            |          | 820 W. Division, Gr. Island     |            |          |
| Hanisch, Robt. W. -----       | 9          | 26       | Heusel, Wm. G. -----        | 5          | 16       | Ingham, Chas. G. -----          | 4          | 32       |
| St. Paul                      |            |          | Hooper                      |            |          | Box 902, Norfolk                |            |          |
| Hankins, Chas. R. -----       | 1          | 37       | Heywood, Leo T. -----       | 1          | 37       | Inslee, Donald O. -----         | 9          | 15       |
| 823 Doctors Bldg., Omaha      |            |          | 828 Med. Arts, Omaha        |            |          | Gothenburg                      |            |          |
| Hanna, Joe T. -----           | 12         | 47       | Hickey, C. W. (Life) -----  | 1          | 37       | Irvin, I. W. (Life) -----       | 3          | 34       |
| 1926 Ave "A," Scottsbluff     |            |          | Bennington                  |            |          | Auburn                          |            |          |
| Hansen, Clifford H. -----     | 1          | 37       | Hieb, Wilbert E. -----      | 6          | 52       | Iwerson, Frank J. -----         | 1          | 37       |
| 209 Doctors Bldg., Omaha      |            |          | Henderson                   |            |          | 1307 Med. Arts, Omaha           |            |          |
| Hansen, H. C. (Life) -----    | 9          | 5        | Hill, F. C. -----           | 1          | 37       | Jackson, Donald R. -----        | 1          | 37       |
| 2206 12th Ave., Kearney       |            |          | 636 Med. Arts, Omaha        |            |          | 8601 W. Dodge Rd., Omaha        |            |          |
| Hansen, Hodson A. -----       | 2          | 30       | Hill, W. H. -----           | 5          | 16       | Jakeman, H. A. -----            | 5          | 16       |
| 140 So. 27th, Lincoln         |            |          | 1737 E. Military, Fremont   |            |          | 2195 N. Broad, Fremont          |            |          |
| Hansen, John E. -----         | 6          | 46       | Hill, W. Ray -----          | 6          | 48       | James, Lawrence R. -----        | 1          | 37       |
| Wahoo                         |            |          | Seward                      |            |          | 728 Doctors Bldg., Omaha        |            |          |
| Hansen, Warren D. -----       | 4          | 32       | Hillyer, R. A. -----        | 2          | 30       | Jardon, Oscar -----             | 9          | 19       |
| Norfolk State Hosp.,          |            |          | 135 So. 14th, Lincoln       |            |          | Loup City                       |            |          |
| Norfolk                       |            |          | Hilton, Hiram D. -----      | 2          | 30       | Jaros, S. H. -----              | 1          | 37       |
| Harb, Fred -----              | 9          | 22       | 1405 Sharp Bldg.            |            |          | 104 So. 39th, Omaha             |            |          |
| Cairo                         |            |          | Lincoln                     |            |          | Jarvis, W. J. -----             | 2          | 30       |
| Hardy, C. C. (Life) -----     | 1          | 37       | Hineman, M. W. -----        | 7          | 45       | 3145 "O" St., Lincoln           |            |          |
| Willoughby, Ohio              |            |          | Crete                       |            |          | Jenkins, Harry -----            | 1          | 37       |
| Harris, Jack T. -----         | 10         | 49       | Hinrichs, E. J. -----       | 6          | 46       | 1113 Redick Tower, Omaha        |            |          |
| Stratton                      |            |          | Wahoo                       |            |          | Jensen, W. P. -----             | 1          | 37       |
| Harry, R. E. -----            | 6          | 52       | Hoagland, Robert A. -----   | 12         | 47       | 3568 Dodge, Omaha               |            |          |
| York                          |            |          | Mitchell                    |            |          | Jensen, Wm. -----               | 1          | 37       |
| Hartigan, John D. -----       | 1          | 37       | Hobbs, E. T. -----          | 2          | 30       | 9006 Ohio, Omaha                |            |          |
| 527 Med. Arts, Omaha          |            |          | 6500 Holdrege, Lincoln      |            |          | Jernstrom, Roger -----          | 1          | 37       |
| Hartmann, Clarence M. ----    | 1          | 37       | Hodgson, Paul E. -----      | 1          | 37       | 410 So. Saddle Cr. Rd.,         |            |          |
| 6025 Ogden, Omaha             |            |          | University Hosp., Omaha     |            |          | Omaha                           |            |          |
| Hartsaw, John E. -----        | 11         | 10       | Hoefvet, L. H. -----        | 8          | 35       | Jester, Royal F., Sr. (Life) -- | 9          | 5        |
| Chappell                      |            |          | Chadron                     |            |          | 814 W. 23rd, Kearney            |            |          |
| Harvey, Alexander T. -----    | 5          | 16       | Hoff, R. Paul -----         | 6          | 48       | Jester, Royal F., Jr. -----     | 9          | 5        |
| 2195 No. Broad, Fremont       |            |          | Seward                      |            |          | 214 W. 25th, Kearney            |            |          |
| Harvey, Andrew (Life) -----   | 5          | 16       | Hoffman, Kenneth C. -----   | 1          | 37       | John, George L. -----           | 4          | 9        |
| 631 N. Main, Fremont          |            |          | Immanuel Hospital, Omaha    |            |          | Wayne                           |            |          |
| Harvey, Donald -----          | 1          | 37       | Hoffmeister, Geo. (Life) -- | 10         | 49       | Johnson, Geo. N. -----          | 1          | 37       |
| 412 So. Saddle Cr. Rd.,       |            |          | Mesa, Ariz.                 |            |          | 3569 Leavenworth, Omaha         |            |          |
| Omaha                         |            |          | Hoffmeister, Geo. F. -----  | 10         | 1        | Johnson, Gordon F. -----        | 1          | 37       |
| Harvey, E. A. (Life) -----    | 11         | 21       | 418 N. Hastings, Hastings   |            |          | 728 Doctors Bldg., Omaha        |            |          |
| New Plymouth, Idaho           |            |          | Hohlen, K. S. J. -----      | 2          | 30       | Johnson, Gordon O. -----        | 7          | 27       |
| Harvey, Harold E. -----       | 2          | 30       | 2961 Sheridan, Lincoln      |            |          | Fairbury                        |            |          |
| 140 So. 27th, Lincoln         |            |          | Holcomb, Gerald R. -----    | 10         | 1        | Johnson, H. F. (Life) -----     | 3          | 37       |
| Harvey, Harry E. (Life) --    | 2          | 30       | 1018 N. Burlington,         |            |          | 209 So. 42nd, Omaha             |            |          |
| 1130 "H" St., Lincoln         |            |          | Hastings                    |            |          | Johnson, J. A. -----            | 1          | 37       |
| Harvey, W. C., Jr. -----      | 12         | 47       | Holcombe, Robt. C. -----    | 1          | 37       | 602 Omaha Loan & Bldg.,         |            |          |
| 1955 10th, Gering             |            |          | 3610 Dodge, Omaha           |            |          | Omaha                           |            |          |
| Harvey, W. C., Sr. -----      | 12         | 47       | Holden, W. J. -----         | 1          | 37       | Johnson, L. Palmer -----        | 2          | 30       |
| 1955 10th, Gering             |            |          | 316 Med. Arts, Omaha        |            |          | 3440 "O" St., Lincoln           |            |          |
| Haskins, J. R. -----          | 9          | 15       | Holmes, Lee C. -----        | 5          | 33       | Johnson, O. D. -----            | 9          | 5        |
| Lexington                     |            |          | Central City                |            |          | 103 W. 22nd, Kearney            |            |          |
| Hasl, Robert F. -----         | 1          | 37       | Holmes, William E. -----    | 12         | 47       | Johnson, Richard D. -----       | 9          | 5        |
| 1016 Med. Arts, Omaha         |            |          | 1926 Ave. "A," Scottsbluff  |            |          | 103 W. 22nd, Kearney            |            |          |
| Haslam, George A. -----       | 5          | 16       | Hood, L. Thomas -----       | 1          | 37       | Johnson, Richard N. -----       | 1          | 37       |
| 625 N. Main, Fremont          |            |          | 209 So. 42nd, Omaha         |            |          | 3932 So. 24th, Omaha            |            |          |
| Hasty, Robert C. -----        | 2          | 30       | Hoody, Steve -----          | 1          | 37       | Johnson, Wilbur -----           | 8          | 25       |
| V.A. Hospital, Lincoln        |            |          | 4951 Center, Omaha          |            |          | Valentine                       |            |          |
| Hathaway, Frederick -----     | 2          | 30       | Hook, R. L. -----           | 8          | 35       | Johnson, Wm. H. -----           | 1          | 37       |
| 1001 "O" St., Lincoln         |            |          | Rushville                   |            |          | 2912 Manderson, Omaha           |            |          |
| Hatch, Francis -----          | 12         | 47       | Horn, Harold R. -----       | 2          | 30       | Johnston, R. S. -----           | 9          | 5        |
| St. Marys Hospital,           |            |          | 3145 "O" St., Lincoln       |            |          | 3 W. 27th, Kearney              |            |          |
| Scottsbluff                   |            |          | Horwich, Joseph M. -----    | 1          | 37       | Johnston, Raymond F. -----      | 9          | 5        |
| Hawkins, Robert E. -----      | 1          | 37       | 717 Kilpatrick Bldg.,       |            |          | 3 W. 27th, Kearney              |            |          |
| 8601 W. Dodge Rd.,            |            |          | Omaha                       |            |          | Jones, Donald W. -----          | 10         | 40       |
| Omaha                         |            |          | Hotz, Harley -----          | 1          | 37       | Holdrege                        |            |          |
| Hayhurst, J. D. -----         | 12         | 47       | 1013 Redick Tower,          |            |          | Jones, John R. -----            | 1          | 37       |
| 213 W. 27th, Scottsbluff      |            |          | Omaha                       |            |          | U of N Hosp., Omaha             |            |          |
| Heaney, Robert -----          | 1          | 37       | House, Robert -----         | 9          | 22       | Jones, R. T. (Life) -----       | 10         | 49       |
| Creighton Univ., Omaha        |            |          | Box 662, Grand Island       |            |          | 217 1/2 Norris Ave., McCook     |            |          |
| Heffron, John F. -----        | 1          | 37       | Howard, C. D. -----         | 5          | 51       | Jones, Robert Dale -----        | 1          | 37       |
| 2580 So. 90th St., Omaha      |            |          | Blair                       |            |          | 105 So. 49th, Omaha             |            |          |
| Heider, Charles F., Jr. ----- | 11         | 31       | Howard, M. C. -----         | 1          | 37       | Jones, Robert K. -----          | 2          | 30       |
| 501 S. Jeffers, No. Platte    |            |          | 1776 No. 52nd St.,          |            |          | 4740 "A" St., Lincoln           |            |          |
| Heider, Charles F., Sr. ----- | 11         | 31       | Omaha                       |            |          | Judd, J. H. -----               | 1          | 37       |
| 501 S. Jeffers, No. Platte    |            |          | Howe, Robert L. -----       | 7          | 36       | 234 Doctors Bldg., Omaha        |            |          |
| Heidrick, Paul J. -----       | 2          | 30       | Nelson                      |            |          | Jurgensen, William W. ----      | 1          | 37       |
| 739 Stuart Bldg., Lincoln     |            |          | Hoyt, Melvin S. -----       | 11         | 31       | 9304 Leavenworth, Omaha         |            |          |
| Heim, Harlan S. -----         | 3          | 44       | 20 So. Carr, North Platte   |            |          | Kadavy, G. J. (Life) -----      | 1          | 37       |
| Humboldt                      |            |          | Hranac, Chas. E. -----      | 9          | 15       | 2703 So. 16th, Omaha            |            |          |
| Heine, Clinton D. -----       | 5          | 42       | Cozad                       |            |          | Kadel, M. A. -----              | 10         | 1        |
| 13th St. & 31st Ave.,         |            |          | Hrnicsek, Leo A. -----      | 12         | 47       | State Hospital, Ingle-          |            |          |
| Columbus                      |            |          | Bayard                      |            |          | side, Hastings                  |            |          |
| Heinke, John P. -----         | 12         | 47       | Hruby, Allan J. -----       | 1          | 37       | Kalin, John A. -----            | 1          | 37       |
| 1723 Ave. "A," Scottsbluff    |            |          | 3169 Leavenworth, Omaha     |            |          | 1909 No. 81st, Omaha            |            |          |
| Heins, Robert L. -----        | 3          | 44       | Hubbard, Theodore F. -----  | 1          | 37       | Kamm, Frank -----               | 10         | 1        |
| Falls City                    |            |          | 1005 Meadow Rd., Omaha      |            |          | Blue Hill                       |            |          |
| Heiser, E. N. -----           | 5          | 42       | Hughes, D. O. -----         | 7          | 27       | Kammandel, Henry -----          | 1          | 37       |
| Box 568, Columbus             |            |          | Hughes, Leo V. -----        | 1          | 37       | 416 Doctors Bldg., Omaha        |            |          |
| Henderson, Harry C. -----     | 1          | 37       | 3610 Dodge, Omaha           |            |          | Karrer, F. M. -----             | 10         | 49       |
| 105 So. 49th, Omaha           |            |          | Hughes, W. T. -----         | 1          | 37       | 1301 Norris Ave., McCook        |            |          |
| Henn, Mary J. -----           | 1          | 37       | Gretna                      |            |          | Karrer, F. W. (Life) -----      | 6          | 52       |
| U. of N. College of           |            |          | Hull, Wayne M. (Life) ----- | 1          | 37       | York                            |            |          |
| Medicine, Omaha               |            |          | St. Petersburg, Fla.        |            |          | Karrer, F. Wm. -----            | 1          | 37       |
| Hepperlen H. M. -----         | 3          | 20       | Hummel, R. O. (Life) -----  | 2          | 30       | 8601 W. Dodge Rd.,              |            |          |
| 206 Steinmeyer Bldg.,         |            |          | 2435 Bradfield Dr.,         |            |          | Omaha                           |            |          |
| Beatrice                      |            |          | Lincoln                     |            |          | Karrer, R. W. -----             | 12         | 47       |
| Herhan, Frank T. -----        | 12         | 47       | Hungerford, Wm. E. -----    | 1          | 37       | 1810 1st Ave., Scottsbluff      |            |          |
| 2122 Broadway, Scottsbluff    |            |          | 1904 Spencer, Omaha         |            |          | Karrer, Robt. E. -----          | 6          | 52       |
| Herpolsheimer, Robert W. --   | 6          | 48       | Hunt, Howard B. -----       | 1          | 37       | York                            |            |          |
| Seward                        |            |          | Univ. of Nebr., Omaha       |            |          | Kaufmann, Jack E. -----         | 6          | 7        |
| Hervert, J. Wm. -----         | 2          | 30       |                             |            |          | David City                      |            |          |
| 3145 "O" St., Lincoln         |            |          |                             |            |          |                                 |            |          |

| Name                                       | Dist. Code | Co. Code | Name                                  | Dist. Code | Co. Code | Name                         | Dist. Code | Co. Code |
|--------------------------------------------|------------|----------|---------------------------------------|------------|----------|------------------------------|------------|----------|
| Keegan, J. Jay (Life)                      | 1          | 37       | Landers, Allan C.                     | 12         | 47       | Luby, Robert J.              | 1          | 37       |
| 669 No. 57th, Omaha                        |            |          | Box 630, Scottsbluff                  |            |          | 828 Med. Arts, Omaha         |            |          |
| Kelley, J. Whitney                         | 1          | 37       | Landgraf, Charles W., Jr.             | 10         | 1        | Lucas, Jos. F.               | 1          | 37       |
| 1513 Med. Arts, Omaha                      |            |          | 605 N. Denver, Hastings               |            |          | 815 W.O.W. Bldg., Omaha      |            |          |
| Kelley, Wm. E.                             | 1          | 37       | Lane, L. Dean                         | 9          | 5        | Lucas, Thomas                | 9          | 14       |
| 1319 Med. Arts, Omaha                      |            |          | 211 W. 33rd, Kearney                  |            |          | Broken Bow                   |            |          |
| Kelly, Gerard                              | 1          | 37       | Langdon, Edward                       | 1          | 37       | Luce, Roscoe P.              | 7          | 27       |
| 816 Med. Arts, Omaha                       |            |          | 823 Doctors Bldg., Omaha              |            |          | Fairbury                     |            |          |
| Kelly, James F., Jr.                       | 1          | 37       | Langdon, Frederick J.                 | 1          | 37       | Luikart, Ralph H.            | 1          | 37       |
| 816 Med. Arts, Omaha                       |            |          | 3610 Dodge, Omaha                     |            |          | 708 Med. Arts, Omaha         |            |          |
| Kelly, James F., Sr.                       | 1          | 37       | Langdon, Robert                       | 1          | 37       | Lukens, Isaiah               | 5          | 6        |
| 816 Med. Arts, Omaha                       |            |          | 8601 W. Dodge Rd., Omaha              |            |          | Tekamah                      |            |          |
| Kemp, Daniel                               | 1          | 37       | Lanspa, Eugene F.                     | 1          | 37       | Lunde, F.                    | 10         | 1        |
| 2218 "L" St., Omaha                        |            |          | 4951 Center, Omaha                    |            |          | Auburn, Calif.               |            |          |
| Kemp, Wm. T.                               | 1          | 37       | Larsen, Arthur L.                     | 1          | 37       | Lyman, Edwin D.              | 1          | 37       |
| 3001 No. 16th, Omaha                       |            |          | 701 Doctors Bldg., Omaha              |            |          | 1201 So. 42nd, Omaha         |            |          |
| Kennedy, J. F.                             | 12         | 4        | Larson, D. L.                         | 11         | 31       | Lynn, Vincent S.             | 7          | 17       |
| 916 W. 10th, Alliance                      |            |          | 719 S. Dewey, No. Platte              |            |          | Geneva                       |            |          |
| Kennedy, John C.                           | 1          | 37       | Larson, Donald J.                     | 6          | 23       | Mabeus, Duane F.             | 10         | 49       |
| 1520 Med. Arts, Omaha                      |            |          | Aurora                                |            |          | Stratton                     |            |          |
| Kenner, W. C.                              | 2          | 38       | Larson, George                        | 2          | 30       | Mabie, James E.              | 8          | 25       |
| Nebraska City                              |            |          | 1301 Sharp Bldg., Lincoln             |            |          | Bassett                      |            |          |
| Kenney, Emmet M.                           | 1          | 37       | Larson, Sherwood L.                   | 7          | 45       | Madden, Patrick J.           | 6          | 23       |
| Nebr. Psychiatric Inst., Omaha             |            |          | Crete                                 |            |          | Aurora                       |            |          |
| Kenney, Kenneth J.                         | 7          | 27       | Latenser, John F.                     | 1          | 37       | Maggiore, Carl H.            | 9          | 22       |
| Fairbury                                   |            |          | 809 Doctors Bldg., Omaha              |            |          | 702 W. 1st, Grand Island     |            |          |
| Kenney, Neil P.                            | 1          | 37       | Latta, C. Rex                         | 1          | 37       | Magid, Bernard               | 1          | 37       |
| 816 Med. Arts, Omaha                       |            |          | 710 Doctors Bldg., Omaha              |            |          | 201 Doctors Bldg., Omaha     |            |          |
| Keown, J. T., Jr.                          | 4          | 9        | Lau, Glen F.                          | 2          | 30       | Magiera, Stephen L.          | 1          | 37       |
| Pender                                     |            |          | 735 So. 56th, Lincoln                 |            |          | 209 Doctors Bldg., Omaha     |            |          |
| Kiekhaefer, Theo. C.                       | 7          | 36       | Laumond, James P.                     | 6          | 46       | Magill, Van                  | 10         | 49       |
| Superior                                   |            |          | Ashland                               |            |          | Curtis                       |            |          |
| Kilgore, W. S.                             | 6          | 52       | Leahy, James J.                       | 1          | 37       | Magruder, Thomas G.          | 1          | 37       |
| York                                       |            |          | 1325 No. Saddle Cr. Rd., Omaha        |            |          | 1512 So. 60th, Omaha         |            |          |
| Kimball, Kenneth F.                        | 9          | 5        | Lear, William J.                      | 4          | 32       | Mailliard, A. E.             | 4          | 41       |
| 9 W. 31st, Kearney                         |            |          | 900 Norfolk Ave., Norfolk             |            |          | Osmond                       |            |          |
| Kingsley, D. W., Sr.                       | 10         | 1        | Lee, Leonard R.                       | 2          | 30       | Mailliard, James A.          | 1          | 37       |
| 105 Foote Bldg., Hastings                  |            |          | 307 So. 16th, Lincoln                 |            |          | 527 Med. Arts, Omaha         |            |          |
| Kingsley, D. W., Jr.                       | 10         | 1        | Lee, Leroy W.                         | 1          | 37       | Malashock, Edward M.         | 1          | 37       |
| 422 N. Hastings, Hastings                  |            |          | 800 Doctors Bldg., Omaha              |            |          | 800 Doctors Bldg., Omaha     |            |          |
| Kirchner, John R.                          | 1          | 37       | Lehnhoff, Henry J.                    | 1          | 37       | Maly, James C.               | 5          | *        |
| 677 No. 59th, Omaha                        |            |          | 720 Doctors Bldg., Omaha              |            |          | Fullerton                    |            |          |
| Kirk, E. J.                                | 1          | 37       | Leininger, E. F.                      | 10         | 49       | Maness, E. Stewart           | 2          | 30       |
| 434 Aquila Ct., Omaha                      |            |          | 114 W. "C" St., McCook                |            |          | 1006 Sharp Bldg., Lincoln    |            |          |
| Klaas, R. E.                               | 4          | 32       | Lemke, Theodore J.                    | 5          | 42       | Mangimelli, Samuel T.        | 1          | 37       |
| 13th & Nebraska, Norfolk                   |            |          | 1454 28th Ave., Columbus              |            |          | 723 Barker Bldg., Omaha      |            |          |
| Klabenes, Frank J.                         | 1          | 37       | Lemon, Henry M.                       | 1          | 37       | Margolin, J. Milton          | 1          | 37       |
| 234 Doctors Bldg., Omaha                   |            |          | U. of N. Hosp., Omaha                 |            |          | 902 Med. Arts, Omaha         |            |          |
| Kleager, Clyde L.                          | 10         | 1        | Lempka, Arnold W.                     | 1          | 37       | Margolin, Morris (Life)      | 1          | 37       |
| 620 N. Denver, Hastings                    |            |          | 502 Med. Arts, Omaha                  |            |          | 902 Med. Arts, Omaha         |            |          |
| Klein, Robert J.                           | 1          | 37       | Lennox, Geo. B. (Life)                | 1          | 37       | Markley, M. E.               | 9          | 19       |
| 1307 Med. Arts, Omaha                      |            |          | 2527 Patrick, Omaha                   |            |          | North Loup                   |            |          |
| Kleinschmidt, G. W.                        | 2          | 30       | Levin, Hugh S.                        | 1          | 37       | Marples, Donald R.           | 11         | 21       |
| Box 232, State Hosp., Hastings (Ingleside) |            |          | 2305 So. 10th, Omaha                  |            |          | Grant                        |            |          |
| Knosp, Glen D.                             | 2          | 9        | Lewis, George E.                      | 2          | 30       | Marsh, P. Wayne              | 1          | 37       |
| Elmwood                                    |            |          | 723 Sharp Bldg., Lincoln              |            |          | Creighton Uni., Omaha        |            |          |
| Koefoot, R. B.                             | 9          | 14       | Lewis, Jack K.                        | 1          | 37       | Martin, Benjamin O.          | 4          | 9        |
| Broken Bow                                 |            |          | 5015 Dodge, Omaha                     |            |          | Pender                       |            |          |
| Koefoot, Robert R.                         | 9          | 22       | Lewis, Kirk C.                        | 1          | 37       | Martin, Francis              | 4          | 32       |
| 706 W. 1st, Grand Island                   |            |          | 8613 No. 30th, Omaha                  |            |          | 1103 Madison, Norfolk        |            |          |
| Koefoot, Theo., Jr.                        | 9          | 14       | Lewis, L. G. H.                       | 2          | 30       | Martin, Paul J.              | 1          | 37       |
| Broken Bow                                 |            |          | 2990 So. 46th, Lincoln                |            |          | 826 Med. Arts, Omaha         |            |          |
| Kohtz, R. H.                               | 4          | 29       | Lewis, Raymond G.                     | 1          | 37       | Martin, Paul R.              | 9          | 19       |
| Bloomfield                                 |            |          | 5015 Dodge, Omaha                     |            |          | Ord                          |            |          |
| Kopp, Robert E.                            | 4          | 41       | LeWorthy, G. W.                       | 2          | 30       | Marx, Louis E.               | 2          | 30       |
| Plainview                                  |            |          | 3145 "O" St., Lincoln                 |            |          | 901 Fed. Sec. Bldg., Lincoln |            |          |
| Kostal, O. A.                              | 10         | 1        | Lipp, Frank E. (Life)                 | 1          | 37       | Marx, Paul D.                | 2          | 30       |
| Box 174, Hastings                          |            |          | 5812 Pierce, Omaha                    |            |          | 901 Fed. Sec. Bldg., Lincoln |            |          |
| Koszewski, Bohdan J.                       | 1          | 37       | Lodge, James L.                       | 2          | 30       | Mason, C. T.                 | 7          | 36       |
| 4002 So. 42nd, Omaha                       |            |          | 3145 "O" St., Lincoln                 |            |          | Superior                     |            |          |
| Kovar, Wm. R.                              | 1          | 37       | Loeffel, E. J.                        | 12         | 47       | Mason, Roger D.              | 10         | 49       |
| 3610 Dodge, Omaha                          |            |          | Mitchell                              |            |          | 305 E. 1st, McCook           |            |          |
| Kovarik, James R.                          | 1          | 37       | Lombardo, Anthony J.                  | 1          | 37       | Mastin, Robert L.            | 10         | 1        |
| 8601 W. Dodge Rd., Omaha                   |            |          | 3929 Harney, Omaha                    |            |          | Route 2, Hastings            |            |          |
| Kratochvil, Bernard                        | 1          | 37       | Long, James S.                        | 10         | 24       | Mathews, M. D.               | 9          | 26       |
| 1307 Med. Arts, Omaha                      |            |          | Alma                                  |            |          | St. Paul                     |            |          |
| Kreymborg, O. C.                           | 11         | 31       | Long, Robert S.                       | 1          | 37       | Mathews, M. Jack             | 2          | 30       |
| Box 669, North Platte                      |            |          | 8721 Shamrock Rd., Omaha              |            |          | 307 So. 16th, Lincoln        |            |          |
| Krickbaum, John                            | 3          | 34       | Long, Wm. B.                          | 9          | 15       | Matson, Guy M.               | 2          | 30       |
| Auburn                                     |            |          | Lexington                             |            |          | 2737 No. 49th, Lincoln       |            |          |
| Krieg, Jacob                               | 12         | 47       | Longacre, O. E. (Life)                | 6          | 7        | Matson, Roy M.               | 4          | 9        |
| 2122 Broadway, Scottsbluff                 |            |          | Soldiers & Sailors Home, Grand Island |            |          | Wayne                        |            |          |
| Kroupa, W. E.                              | 1          | 37       | Longo, Charles A.                     | 1          | 37       | Matthews, Donald             | 2          | 30       |
| 8601 W. Dodge Rd., Omaha                   |            |          | 2227 Jefferson, Bellevue              |            |          | 140 So. 27th, Lincoln        |            |          |
| Kuehn, Gerald A.                           | 10         | 1        | Longo, Joseph A.                      | 1          | 37       | Mauer, R. T.                 | 1          | 37       |
| 12th St. and Baltimore Ave., Hastings      |            |          | 302 No. 22nd St., Omaha               |            |          | 1520 Med. Arts, Omaha        |            |          |
| Kulesh, Morton H.                          | 1          | 37       | Look, Charles E.                      | 1          | 37       | Maxwell, Paul J.             | 2          | 30       |
| 530 Loveland Dr., Omaha                    |            |          | 3610 Dodge, Omaha                     |            |          | 1701 So. 17th, Lincoln       |            |          |
| Kuncl, Joseph (Life)                       | 12         | 4        | Loomis, George W.                     | 1          | 37       | Maynard, James H.            | 1          | 37       |
| 1012 Laramie Ave., Alliance                |            |          | 720 Doctors Bldg., Omaha              |            |          | 2505 No. 50th, Omaha         |            |          |
| Kunkel, L. N.                              | 2          | 8        | Lorincz, Albert B.                    | 1          | 37       | McArdle, G. Prentiss         | 1          | 37       |
| Weeping Water                              |            |          | Creighton Clinic, Omaha               |            |          | 1215 Med. Arts, Omaha        |            |          |
| Kuper, Herbert D.                          | 5          | 42       | Loschen, Darroll J.                   | 4          | 9        | McAvin, J. S. (Life)         | 1          | 37       |
| 2511 15th, Columbus                        |            |          | York                                  |            |          | Lutheran Hosp., Omaha        |            |          |
| Kuxhausen, D. L.                           | 10         | 49       | Loudon, John R.                       | 2          | 30       | McCammond, John M.           | 9          | 5        |
| Dallas, Texas                              |            |          | 1110 Sharp Bldg., Lincoln             |            |          | 11 W. 31st, Kearney          |            |          |
| Ladwig, Harold A.                          | 1          | 37       | Loveland, Grace                       | 2          | 30       | McCarthy, Harry H.           | 1          | 37       |
| 302 City Natl. Bank, Omaha                 |            |          | 909 Sharp Bldg., Lincoln              |            |          | 326 Med. Arts, Omaha         |            |          |
|                                            |            |          | Lovgren, R. E.                        | 1          | 37       | McCarthy, Joseph D. (Life)   | 1          | 37       |
|                                            |            |          | 719 Doctors Bldg., Omaha              |            |          | 1036 Med. Arts, Omaha        |            |          |
|                                            |            |          |                                       |            |          | McCarthy, T. F. (Life)       | 2          | 30       |
|                                            |            |          |                                       |            |          | No. 5 Theatre Bldg., Lincoln |            |          |



| Name                            | Dist.<br>Code | Co.<br>Code | Name                                    | Dist.<br>Code | Co.<br>Code | Name                                   | Dist.<br>Code | Co.<br>Code |
|---------------------------------|---------------|-------------|-----------------------------------------|---------------|-------------|----------------------------------------|---------------|-------------|
| McCaslin, Joseph -----          | 1             | 37          | Miller, Fletcher A. -----               | 1             | 37          | Murphy, Chas. M. -----                 | 1             | 27          |
| 6016 Ames Ave., Omaha           |               |             | St. Joseph's Hosp., Omaha               |               |             | 5901 Military, Omaha                   |               |             |
| McClanahan, Frank C. ----       | 4             | 2           | Miller, Harold B. -----                 | 2             | 30          | Murphy, J. Harry -----                 | 1             | 37          |
| Neligh                          |               |             | 1403 Sharp Bldg., Lincoln               |               |             | 8601 W. Dodge Rd.,<br>Omaha            |               |             |
| McCleery, D. P. -----           | 3             | 20          | Miller, N. R. -----                     | 2             | 30          | Murphy, Jerome P. -----                | 1             | 37          |
| 108 So. 6th, Beatrice           |               |             | 735 Stuart Bldg., Lincoln               |               |             | 320 No. 20th St., Omaha                |               |             |
| McCleneghen, Sam (Life) --      | 1             | 37          | Miller, Otis W. -----                   | 9             | 19          | Murphy, John E. -----                  | 6             | 23          |
| Rt. 1, Valley                   |               |             | Ord                                     |               |             | Aurora                                 |               |             |
| McConahay, Harold -----         | 10            | 40          | Miller, Samuel D. -----                 | 2             | 30          | Murphy, Robert E. -----                | 1             | 37          |
| Holdrege                        |               |             | 5532 South, Lincoln                     |               |             | 204 So. 42nd, Omaha                    |               |             |
| McCormick, Keith M. -----       | 1             | 37          | Miller, Warren R. -----                 | 5             | 42          | Murray, Don E. -----                   | 10            | 1           |
| 3610 Dodge, Omaha               |               |             | 1454 28th Ave., Columbus                |               |             | 604 W. 6th, Hastings                   |               |             |
| McCrann, W. J. (Life) -----     | 1             | 37          | Millett, G. J. -----                    | 5             | 16          | Murray, Robert G. -----                | 1             | 37          |
| 319 Med. Arts, Omaha            |               |             | 2195 N. Broad, Fremont                  |               |             | Benson Med. Center, Omaha              |               |             |
| McDaniel, V. S. -----           | 10            | 1           | Minard, David W. -----                  | 1             | 37          | Muskin, Nathan -----                   | 1             | 37          |
| Box 148, Hastings               |               |             | 3610 Dodge, Omaha                       |               |             | 2602 "J" St., Omaha                    |               |             |
| (Ingleside)                     |               |             | Minthorn, Murray F. -----               | 1             | 37          | Musselman, Merle M. -----              | 1             | 37          |
| McDermott, Arnold -----         | 1             | 37          | 5620 Ames, Omaha                        |               |             | U. of N. College of<br>Medicine, Omaha |               |             |
| 712 Medical Arts., Omaha        |               |             | Minnick, Clarence -----                 | 10            | 49          | Myers, H. Dey -----                    | 5             | 12          |
| McDermott, K. F. -----          | 9             | 22          | Cambridge                               |               |             | Schuyler                               |               |             |
| 1704 W. 2nd, Gr. Island         |               |             | Misko, George -----                     | 2             | 30          | Nabity, Stanley N. -----               | 9             | 22          |
| McDonald, Raymond -----         | 1             | 37          | 706 1st Natl. Bank, Lincoln             |               |             | 217½ N. Pine, Gr. Island               |               |             |
| 617 Med. Arts, Omaha            |               |             | Mitchell, Howard E. -----               | 2             | 30          | Nachman, E. A. -----                   | 1             | 37          |
| McFadden, Harry W. -----        | 1             | 37          | 2300 So. 13th, Lincoln                  |               |             | Council Bluffs, Ia.                    |               |             |
| 701 Doctors Bldg., Omaha        |               |             | Mitchell, John R. -----                 | 1             | 37          | Nagengast, Delwyn J. -----             | 4             | 29          |
| McGee, Dean -----               | 9             | 15          | 4815 Dodge, Omaha                       |               |             | Bloomfield                             |               |             |
| Lexington                       |               |             | Mnuk, F. J. -----                       | 1             | 37          | Nebe, Frederick M. -----               | 2             | 30          |
| McGinnis, Kenneth T. -----      | 2             | 30          | 3374 So. 13th, Omaha                    |               |             | 943 Stuart Bldg., Lincoln              |               |             |
| 3145 "O" St., Lincoln           |               |             | Moell, L. Dwight -----                  | 3             | 20          | Neely, J. Marshall -----               | 2             | 30          |
| McGoogan, Leon S. -----         | 1             | 37          | 109½ So. 6th, Beatrice                  |               |             | Bryan Mem. Hosp., Lincoln              |               |             |
| 8601 W. Dodge Rd., Omaha        |               |             | Moessner, Samuel F. -----               | 2             | 30          | Neely, Orvis A. -----                  | 2             | 30          |
| McGrath, Chas. D. -----         | 9             | 22          | 1025 Sharp Bldg., Lincoln               |               |             | 924 Sharp Bldg., Lincoln               |               |             |
| 1704 W. 2nd, Gr. Island         |               |             | Mongeau, D. C. -----                    | 9             | 22          | Neil, Stanley R. -----                 | 4             | 29          |
| McGrath, W. D. -----            | 9             | 22          | 702 W. Koenig, Gr. Island               |               |             | Niobrara                               |               |             |
| 1704 W. 2nd, Gr. Island         |               |             | Moody, W. B. (Life) -----               | 1             | 37          | Neis, Delbert D. -----                 | 1             | 37          |
| McGrath, William M. -----       | 9             | 22          | 1017 No. 63rd, Omaha                    |               |             | 525 Doctors Bldg., Omaha               |               |             |
| 1st Natl. Bank, Gr. Island      |               |             | Moon, Chas. F. (Life) -----             | 1             | 37          | Neligh, Rosalie B. -----               | 1             | 37          |
| McGreer, John T. -----          | 2             | 30          | 410 So. Saddle Cr. Rd.,<br>Omaha        |               |             | Council Bluffs, Ia.                    |               |             |
| 924 Sharp Bldg., Lincoln        |               |             | Moore, Ralph C. -----                   | 1             | 37          | Nelson, C. C. -----                    | 5             | 16          |
| McGrew, K. C. -----             | 10            | 24          | 2017 So. 107th, Omaha                   |               |             | 2195 N. Broad, Fremont                 |               |             |
| Orleans                         |               |             | Moore, Robert F. -----                  | 2             | 30          | Nelson, F. C. -----                    | 1             | 37          |
| McIntire, Matilda S. -----      | 1             | 37          | 1010 Sharp Bldg., Lincoln               |               |             | 2734 No. 61st, Omaha                   |               |             |
| 602 So. 44th, Omaha             |               |             | Moore, Y. Scott -----                   | 2             | 30          | Nelson, J. C. -----                    | 3             | 20          |
| McIntire, Robt. -----           | 10            | 1           | 135 So. 14th, Lincoln                   |               |             | Wymore                                 |               |             |
| 612 W. 6th, Hastings            |               |             | Mooring, Paul K. -----                  | 1             | 37          | Nelson, Lyle -----                     | 7             | 45          |
| McIntire, Russell -----         | 10            | 1           | 301 Doctors Bldg., Omaha                |               |             | Crete                                  |               |             |
| 715 No. St. Joseph,<br>Hastings |               |             | Moragues, Vincent -----                 | 1             | 37          | Nelson, O. B. -----                    | 5             | 16          |
| McIntire, Waldean C. -----      | 1             | 37          | Creighton Univ., Omaha                  |               |             | Scribner                               |               |             |
| 3610 Dodge, Omaha               |               |             | Moran, C. S. -----                      | 1             | 37          | Nemec, C. J. (Life) -----              | 1             | 37          |
| McKain, John M. -----           | 1             | 37          | Archbishop Bergan Mercy<br>Hosp., Omaha |               |             | 1908 So. 15th, Omaha                   |               |             |
| 2305 So. 10th, Omaha            |               |             | Morgan, D. H., Sr. (Life) --            | 10            | 49          | Neu, Harold N. -----                   | 1             | 37          |
| McKinney, Daniel L. -----       | 1             | 37          | Box 491, McCook                         |               |             | 207 So. 42nd, Omaha                    |               |             |
| 1012 Med. Arts, Omaha           |               |             | Morgan, Donal H., Jr. -----             | 10            | 49          | Neumayer, Francis -----                | 2             | 30          |
| McLaughlin, C. W., Jr. -----    | 1             | 37          | Box 491, McCook                         |               |             | 48th and "A" Sts., Lincoln             |               |             |
| 409 Doctors Bldg., Omaha        |               |             | Morgan, Harold S. -----                 | 2             | 30          | Newell, Charles H. -----               | 2             | 30          |
| McLeay, John F. -----           | 1             | 37          | 3440 "O" St., Lincoln                   |               |             | 4848 Sumner St., Lincoln               |               |             |
| 1118 Med. Arts, Omaha           |               |             | Morgan, R. J. -----                     | 12            | 4           | Nicholson, Ralph -----                 | 10            | 40          |
| McMahon, Chas. F. (Life) --     | 7             | 36          | 916 W. 10th, Alliance                   |               |             | Holdrege                               |               |             |
| Superior                        |               |             | Morgan, Roland R. -----                 | 10            | 49          | Niehaus, Friedrich W. -----            | 1             | 37          |
| McMartin, W. J. -----           | 1             | 37          | Cambridge                               |               |             | (Life)                                 |               |             |
| 603 City Natl. Bank,<br>Omaha   |               |             | Morris, Haskel -----                    | 1             | 37          | 824 Doctors Bldg., Omaha               |               |             |
| McMillan, Aaron M. -----        | 1             | 37          | 530 Med. Arts, Omaha                    |               |             | Niehaus, Karl F. -----                 | 1             | 37          |
| 2854 Wirt, Omaha                |               |             | Morrison, Wm. H. -----                  | 1             | 37          | 824 Doctors Bldg., Omaha               |               |             |
| McMillan, John A. -----         | 10            | 1           | 710 Doctors Bldg., Omaha                |               |             | Niehaus, William C. -----              | 6             | 7           |
| Box 67, Hastings                |               |             | Morrow, B. E. (Life) -----              | 6             | 48          | David City                             |               |             |
| McMurtrev, George B. -----      | 1             | 37          | Seward                                  |               |             | Niehus, Wm. B. -----                   | 11            | 31          |
| 110 Doctors Bldg., Omaha        |               |             | Morrow, H. H. -----                     | 5             | 16          | 402 S. Jeffers, No. Platte             |               |             |
| McNamara, J. W. -----           | 1             | 37          | 423 W. 11th, Fremont                    |               |             | Nils on, Donald C. -----               | 1             | 37          |
| 334 Doctors Bldg., Omaha        |               |             | Morrow, Lawrence -----                  | 5             | 6           | 4209 Douglas, Omaha                    |               |             |
| McNamara, Lee T. -----          | 1             | 37          | Tekamah                                 |               |             | Nolan, James R. -----                  | 1             | 37          |
| 334 Doctors Bldg., Omaha        |               |             | Morrow, Paul N. -----                   | 1             | 37          | 9015 Arbor, Omaha                      |               |             |
| McNeill, L. S. -----            | 10            | 1           | 3610 Dodge, Omaha                       |               |             | Norall, Victor D. -----                | 9             | 15          |
| 605 No. Denver, Hastings        |               |             | Morton, H. B. -----                     | 2             | 30          | Lexington                              |               |             |
| McNulty, Edward A. -----        | 12            | 4           | 4401 Sumner, Lincoln                    |               |             | Nordlund, Harold M. -----              | 6             | 52          |
| 916 W. 10th, Alliance           |               |             | Mountford, F. A. -----                  | 7             | 50          | York                                   |               |             |
| McWhorter, Clarence A. ---      | 1             | 37          | Davenport                               |               |             | Norman, Chester L. -----               | 2             | 30          |
| 10711 Cedar, Omaha              |               |             | Mountford, Stanley -----                | 1             | 37          | 3560 So. 48th, Lincoln                 |               |             |
| Mead, Beverley -----            | 1             | 37          | Millard                                 |               |             | Norton, Robert -----                   | 6             | 46          |
| St. Joseph's Hosp., Omaha       |               |             | Muehler, G. Kenneth -----               | 1             | 37          | Yutan                                  |               |             |
| Meckel, Ben R. -----            | 9             | 19          | 636 Med. Arts, Omaha                    |               |             | Novak, Wm. F. -----                    | 1             | 37          |
| Burwell                         |               |             | Muehlig, Wilbur A. -----                | 1             | 37          | 307 Med. Arts, Omaha                   |               |             |
| Medlar, Clyde Avery -----       | 5             | 42          | 636 Med. Arts, Omaha                    |               |             | Nuss, H. V. -----                      | 7             | 11          |
| 1454 28th Ave., Columbus        |               |             | Mueller, Albert -----                   | 9             | 5           | Sutton                                 |               |             |
| Meissner, Richard -----         | 1             | 37          | Good Samaritan Hosp.,<br>Kearney        |               |             | Nutzman, Wm. E. -----                  | 9             | 5           |
| 521 Doctors Bldg., Omaha        |               |             | Mueller, R. F. -----                    | 2             | 30          | Nye, Dan A. -----                      | 9             | 5           |
| Melcher, W. H. (Life) -----     | 1             | 37          | 1325 Sharp Bldg., Lincoln               |               |             | 5 W. 31st, Kearney                     |               |             |
| 9232 Dorcas, Omaha              |               |             | Muffy, Charles G. -----                 | 4             | 9           | Nye, Wm. F. -----                      | 2             | 30          |
| Melcher, Wm. C. -----           | 1             | 37          | Pender                                  |               |             | 950 Stuart Bldg., Lincoln              |               |             |
| 10060 Miami, Omaha              |               |             | Muffy, Robert B. -----                  | 1             | 37          | Oba, Calvin M. -----                   | 12            | 47          |
| Menolascino, Frank J. -----     | 1             | 37          | 602 So. 44th, Omaha                     |               |             | 116 W. 17th, Scottsbluff               |               |             |
| 2318 So. 102nd, Omaha           |               |             | Mulcahy, Gabriel -----                  | 1             | 37          | Oberst, Byron B. -----                 | 1             | 37          |
| Mergens, D. N. -----            | 1             | 37          | 2206 So. 84th, Omaha                    |               |             | 3925 Dewey Ave., Omaha                 |               |             |
| 6220 Maple, Omaha               |               |             | Mullmann, Arnold J. -----               | 5             | 6           | Ober, Francis -----                    | 10            | 1           |
| Merrick, A. J. -----            | 5             | 16          | Oakland                                 |               |             | Red Cloud                              |               |             |
| 1005 E. 23rd, Fremont           |               |             | Munger, A. D. (Life) -----              | 2             | 30          | O'Donnell, H. J. -----                 | 10            | 1           |
| Messer, Robt. H. -----          | 1             | 37          | Bullhead City, Ariz.                    |               |             | Hastings (Ingleside)                   |               |             |
| Univ. Hosp., Omaha              |               |             | Munger, Horace V. -----                 | 2             | 30          | Offerman, A. J. -----                  | 1             | 37          |
| Meyer, Roger -----              | 6             | 48          | 3705 South, Lincoln                     |               |             | 4805½ So. 24th, Omaha                  |               |             |
| Utica                           |               |             | Murphy, Albert V. -----                 | 1             | 37          | Ohme, K. A. -----                      | 12            | 47          |
| Meyers, V. Wm. -----            | 1             | 37          | 826 Med. Arts, Omaha                    |               |             | Mitchell                               |               |             |
| 7328 Maple, Omaha               |               |             |                                         |               |             |                                        |               |             |
| Miller, Daniel -----            | 1             | 37          |                                         |               |             |                                        |               |             |
| 326 Doctors Bldg., Omaha        |               |             |                                         |               |             |                                        |               |             |



| Name                             | Dist. Code | Co. Code | Name                                  | Dist. Code | Co. Code | Name                                     | Dist. Code | Co. Code |
|----------------------------------|------------|----------|---------------------------------------|------------|----------|------------------------------------------|------------|----------|
| O'Holleran, Lloyd S. -----       | 12         | 10       | Placek, Louis T. -----                | 1          | 37       | Reece, S. O. -----                       | 2          | 30       |
| Sidney                           |            |          | 211 Med. Arts, Omaha                  |            |          | 816 Sharp Bldg., Lincoln                 |            |          |
| Olney, R. C. -----               | 2          | 30       | Pleiss, Joseph A. -----               | 1          | 37       | Reeve, Chas. L. -----                    | 2          | 30       |
| 4600 Valley Rd., Lincoln         |            |          | 716 Med. Arts, Omaha                  |            |          | 6330 Platte Ave., Lincoln                |            |          |
| Olnhausen, Ronald W. -----       | 1          | 37       | Podlesak, James I. -----              | 2          | 30       | Reeves, E. Howard -----                  | 9          | 26       |
| 3610 Dodge, Omaha                |            |          | 612-614 Terminal Bldg., Lincoln       |            |          | Scotia                                   |            |          |
| Olsen, Richard -----             | 6          | 43       | Poepsel, Howard F. -----              | 1          | 37       | Reichstadt, Paul F. -----                | 1          | 37       |
| Stromsburg                       |            |          | 1012 Med. Arts, Omaha                 |            |          | 3001 No. 16th, Omaha                     |            |          |
| Olson, Leland J. -----           | 1          | 37       | Pogge, Raymond -----                  | 2          | 30       | Reighter, Kenneth M. -----               | 1          | 37       |
| 201 Doctors Bldg., Omaha         |            |          | Dorsey Labs., Lincoln                 |            |          | 3665 "Q" St., Omaha                      |            |          |
| Olson, Raymond H. -----          | 12         | 4        | Pollack, John D. -----                | 4          | 32       | Reiner, Walter M. -----                  | 10         | 40       |
| 524 Box Butte, Alliance          |            |          | 312 Valley View Dr., Norfolk          |            |          | Holdrege                                 |            |          |
| Olsson, P. Bryant -----          | 9          | 15       | Porter, John W. -----                 | 3          | 20       | Retelsdorf, C. Lee -----                 | 1          | 37       |
| Lexington                        |            |          | 1200 So. 9th, Beatrice                |            |          | 3610 Dodge, Omaha                        |            |          |
| O'Neil, John R. -----            | 5          | 12       | Porterfield, John F. -----            | 2          | 30       | Reynolds, W. E. -----                    | 4          | 9        |
| Clarkson                         |            |          | 1145 South St., Lincoln               |            |          | South Sioux City                         |            |          |
| O'Neil, Gerald C. -----          | 1          | 37       | Post, George P. -----                 | 12         | 47       | Richard, Warren E. -----                 | 10         | 1        |
| 3610 Dodge, Omaha                |            |          | Bridgeport                            |            |          | 715 N. St. Joseph, Hastings              |            |          |
| O'Neil, James J. -----           | 1          | 37       | Potter, Stanley E. -----              | 1          | 37       | Richards, F. L. -----                    | 9          | 5        |
| 612 Med. Arts, Omaha             |            |          | 609 Doctors Bldg., Omaha              |            |          | 214 W. 25th, Kearney                     |            |          |
| Organ, Claude H. -----           | 1          | 37       | Potthoff, Carl J. -----               | 1          | 37       | Rickman, James H. -----                  | 2          | 30       |
| 914 Med. Arts, Omaha             |            |          | U. of N. College of Medicine, Omaha   |            |          | 626 Sharp Bldg., Lincoln                 |            |          |
| Osborn, Leslie -----             | 1          | 37       | Potts, L. C. -----                    | 11         | 21       | Riddell, Ted -----                       | 12         | 47       |
| Nebr. Psychiatric Inst., Omaha   |            |          | Grant                                 |            |          | 15 E. 18th, Scottsbluff                  |            |          |
| Osborne, Robert G. -----         | 4          | 32       | Pratt, Peyton T. -----                | 1          | 37       | Rider, E. E. (Life) -----                | 2          | 30       |
| Box 902, Norfolk                 |            |          | 600 Doctors Bldg., Omaha              |            |          | Orleans                                  |            |          |
| Owen, Bernard A. -----           | 8          | 35       | Premis, Evald -----                   | 10         | 40       | Rider, Larry (Life) -----                | 2          | 30       |
| Hay Springs                      |            |          | Holdrege                              |            |          | 835 Eldon Dr., Lincoln                   |            |          |
| Owens, C. A. (Life) -----        | 1          | 37       | Prentice, O. D. -----                 | 12         | 47       | Ries, Gerald -----                       | 1          | 37       |
| Tucson, Ariz.                    |            |          | Morrill                               |            |          | 3568 Dodge, Omaha                        |            |          |
| Palmer, Janet Forbes -----       | 2          | 30       | Prescher, Donald A. -----             | 1          | 37       | Ring, Floyd O. -----                     | 1          | 37       |
| 343 Stuart Bldg., Lincoln        |            |          | 5404 Ames, Omaha                      |            |          | Union                                    |            |          |
| Pankau, J. B. -----              | 12         | 10       | Prince, Donald F. -----               | 10         | 1        | Riskalla, San -----                      | 12         | 47       |
| Dalton                           |            |          | Minden                                |            |          | 218 W. 27th, Scottsbluff                 |            |          |
| Pantano, Anthony R. -----        | 1          | 37       | Proffitt, J. Alfred -----             | 9          | 22       | Robertson, Geo. E. -----                 | 1          | 37       |
| 714 W.O.W. Bldg., Omaha          |            |          | 704 W. Koenig, Gr. Island             |            |          | 308 So. 39th, Omaha                      |            |          |
| Panzer, H. J. -----              | 8          | 25       | Pruner, A. C. (Life) -----            | 1          | 37       | Roffman, Larry -----                     | 1          | 37       |
| Bassett                          |            |          | 717 Med. Arts, Omaha                  |            |          | 834 Doctors Bldg., Omaha                 |            |          |
| Papenfuss, Harlan L. -----       | 2          | 30       | Pullman, George R. -----              | 1          | 37       | Rogers, E. A. -----                      | 2          | 30       |
| 1403 Sharp Bldg., Lincoln        |            |          | Lutheran Hosp., Omaha                 |            |          | St. Dept. Health, Lincoln                |            |          |
| Parkison, Donald E. -----        | 1          | 37       | Purvis, Donald -----                  | 2          | 30       | Rogers, James -----                      | 9          | 19       |
| Millard Shopping Center, Millard |            |          | 1701 So. 17th, Lincoln                |            |          | Klamath Falls, Ore.                      |            |          |
| Paulson, H. O. -----             | 2          | 30       | Pyle, B. W. -----                     | 9          | 15       | Root, Charles M. -----                   | 1          | 37       |
| 508 Sharp Bldg., Lincoln         |            |          | Gothenburg                            |            |          | 3610 Dodge, Omaha                        |            |          |
| Paustian, Frederick F. -----     | 1          | 37       | Quick, Robert -----                   | 7          | 45       | Rose, Forrest I. -----                   | 2          | 30       |
| 301 Doctors Bldg., Omaha         |            |          | Crete                                 |            |          | 916 Sharp Bldg., Lincoln                 |            |          |
| Pearse, Warren H. -----          | 1          | 37       | Quinlan, Maurice F. -----             | 1          | 37       | Rose, Kenneth D. -----                   | 2          | 30       |
| Univ. Hospital, Omaha            |            |          | 6016 Ames, Omaha                      |            |          | Student Health Center, U. of N., Lincoln |            |          |
| Peartree, Sherwood P. -----      | 1          | 37       | Quiring, Henry J. -----               | 1          | 37       | Rosenau, J. A. -----                     | 12         | 47       |
| 415 Med. Arts, Omaha             |            |          | 2734 No. 61st, Omaha                  |            |          | 102 E. 21st, Scottsbluff                 |            |          |
| Peck, James -----                | 9          | 5        | Racines, J. Y. -----                  | 9          | 26       | Rosenau, Oliver P. -----                 | 9          | 15       |
| 7 W. 31st, Kearney               |            |          | Soldiers & Sailors Home, Grand Island |            |          | Cozad                                    |            |          |
| Pederson, E. Stanley -----       | 1          | 37       | Radin, Robert V. -----                | 5          | 6        | Rosenlof, R. C. -----                    | 9          | 5        |
| 622 Doctors Bldg., Omaha         |            |          | Lyons                                 |            |          | 5 W. 31st, Kearney                       |            |          |
| Peeetz, Dwaine J. -----          | 4          | 2        | Raines, Max M. -----                  | 11         | 31       | Roth, Wm. F. -----                       | 1          | 37       |
| Neligh                           |            |          | 115 E. "E" St., No. Platte            |            |          | Nebr. Psychiatric Inst., Omaha           |            |          |
| Pemberton, John W. -----         | 1          | 37       | Ramsay, James E. -----                | 8          | 25       | Rounsborg, Harold -----                  | 11         | 21       |
| 8601 W. Dodge Rd., Omaha         |            |          | Atkinson                              |            |          | Oshkosh                                  |            |          |
| Penner, Donald -----             | 3          | 20       | Rance, Wm. T. -----                   | 1          | 37       | Rouse, James W. -----                    | 1          | 37       |
| 205 N. 19th, Beatrice            |            |          | 730 City Natl. Bank, Omaha            |            |          | 1012 Med. Arts, Omaha                    |            |          |
| Penner, Elmer -----              | 3          | 20       | Rasgorshchek, R. H. -----             | 1          | 37       | Rubnitz, A. S. -----                     | 1          | 37       |
| 205 N. 19th, Beatrice            |            |          | 425 Aquila Ct., Omaha                 |            |          | 722 Med. Arts, Omaha                     |            |          |
| Penor, Robert -----              | 12         | 35       | Rasmussen, John A. -----              | 1          | 37       | Rudolph, Larry -----                     | 6          | 7        |
| Chadron                          |            |          | 609 Doctors Bldg., Omaha              |            |          | David City                               |            |          |
| Penry, R. E. -----               | 7          | 50       | Rasmussen, Robert -----               | 12         | 35       | Ruffing, John J. -----                   | 12         | 4        |
| Hebron                           |            |          | Chadron                               |            |          | Hemingford                               |            |          |
| Pepper, Maurice L. -----         | 1          | 37       | Rath, Hans -----                      | 1          | 37       | Rumbolz, Wm. L. -----                    | 1          | 37       |
| 8601 W. Dodge Rd., Omaha         |            |          | 320 Doctors Bldg., Omaha              |            |          | 410 S. Saddle Cr. Rd., Omaha             |            |          |
| Perrin, Theodore -----           | 1          | 37       | Rath, Otto G. -----                   | 1          | 37       | Runco, Vincent -----                     | 1          | 37       |
| St. Joseph's Hosp., Omaha        |            |          | 3929 Harney, Omaha                    |            |          | St. Joseph's Hosp., Omaha                |            |          |
| Perry, S. H. -----               | 9          | 15       | Rathbun, Sanford M. -----             | 3          | 20       | Rundquist, R. B. -----                   | 5          | 42       |
| Children's Mem. Hosp., Omaha     |            |          | 114 So. 6th, Beatrice                 |            |          | 2360 Pershing Rd., Columbus              |            |          |
| Pestal, Joe (Life) -----         | 6          | 46       | Rathbun, S. R. -----                  | 12         | 10       | Runty, H. D. (Life) -----                | 3          | 20       |
| Rawlins, Wyo.                    |            |          | Sidney                                |            |          | DeWitt                                   |            |          |
| Peters, G. E. -----              | 4          | 9        | Read, Paul S. -----                   | 1          | 37       | Russell, Harry -----                     | 9          | 22       |
| Randolph                         |            |          | 6025 Ogden, Omaha                     |            |          | Univ. Hosp., Omaha                       |            |          |
| Peters, Richard -----            | 1          | 37       | Reardon, Wm. -----                    | 5          | 3        | Rustad, Elliott L. -----                 | 2          | 30       |
| 9015 Arbor, Omaha                |            |          | St. Edward                            |            |          | 810 Sharp Bldg., Lincoln                 |            |          |
| Peterson, Margaret -----         | 1          | 37       | Redfield, J. B. (Life) -----          | 11         | 31       | Rutt, Fred J. -----                      | 10         | 1        |
| Nebr. Psychiatric Inst., Omaha   |            |          | 508 1/2 N. Dewev. No. Platte          |            |          | 704 Eastside Blvd., Hastings             |            |          |
| Peterson, Paul L. -----          | 2          | 30       | Redgwich, J. P. -----                 | 1          | 37       | Ryder, Frank D. -----                    | 9          | 22       |
| 707 Sharp Bldg., Lincoln         |            |          | 410 So. Saddle Cr. Rd., Omaha         |            |          | 1902 W. Charles, Gr. Island              |            |          |
| Peterson, Ronald -----           | 1          | 37       | Reed, E. B. -----                     | 2          | 30       | Ryder, James E. -----                    | 1          | 37       |
| 6025 Ogden, Omaha                |            |          | 3145 "O" St., Lincoln                 |            |          | 1901 Missouri, Omaha                     |            |          |
| Peterson, Theo. A. -----         | 10         | 40       | Reed, Paul A. -----                   | 7          | 50       | Sage, John C. -----                      | 1          | 37       |
| Holdrege                         |            |          | Deshler                               |            |          | 8721 Shamrock Rd., Omaha                 |            |          |
| Pinkerton, Clifford C. -----     | 11         | 31       | Reeder, Grant (Life) -----            | 5          | 16       | Sallenbach, Donald H. -----              | 9          | 5        |
| 402 S. Jeffers, No. Platte       |            |          | 212 First Natl. Bank, Fremont         |            |          | Gibbon                                   |            |          |
| Pinne, Geo. F. -----             | 1          | 37       | Reeder, Robert C. -----               | 5          | 16       | Salter, George B. -----                  | 4          | 32       |
| 421 Doctors Bldg., Omaha         |            |          | Fremont                               |            |          | 900 Norfolk Ave., Norfolk                |            |          |
| Pinney, Geo. L. -----            | 10         | 1        | Reeder, Wm. J. -----                  | 5          | 3        | Samuelson, Myron E. -----                | 3          | 20       |
| 418 N. Hastings, Hastings        |            |          | Cedar Rapids                          |            |          | Wymore                                   |            |          |
| Pirotte, Richard A. -----        | 1          | 37       | Reedy, Wm. J. -----                   | 1          | 37       | Sanderson, D. D. -----                   | 2          | 30       |
| 9015 Arbor, Omaha                |            |          | 207 So. 42nd, Omaha                   |            |          | 914 Stuart Bldg., Lincoln                |            |          |
| Pitsch, Richard M. -----         | 6          | 48       | Rees, Barney B. -----                 | 1          | 37       | Sasse, Carl W., Jr. -----                | 1          | 37       |
| Seward                           |            |          | 419 Doctors Bldg., Omaha              |            |          | 8601 W. Dodge Rd., Omaha                 |            |          |
| Place, Geo. E. -----             | 2          | 30       |                                       |            |          | Sauer, L. E. -----                       | 5          | 6        |
| 4825 St. Paul, Lincoln           |            |          |                                       |            |          | Tekamah                                  |            |          |

| Name                           | Dist. Code | Co. Code | Name                                | Dist. Code | Co. Code | Name                           | Dist. Code | Co. Code |
|--------------------------------|------------|----------|-------------------------------------|------------|----------|--------------------------------|------------|----------|
| Saults, Chas. F. -----         | 12         | 4        | Sitorius, Rodney A. -----           | 9          | 15       | Stein, Robert J. -----         | 2          | 30       |
| Mullen                         |            |          | Cozad                               |            |          | 930 Stuart Bldg., Lincoln      |            |          |
| Sawyers, Gordon E. -----       | 11         | 31       | Sjogren, Merle -----                | 1          | 37       | Steinberg, M. M. -----         | 1          | 37       |
| 715 S. Jeffers, No. Platte     |            |          | 105 So. 49th St., Omaha             |            |          | 307 Med. Arts, Omaha           |            |          |
| Schack, Colin B. -----         | 1          | 37       | Skoog, Donald P. -----              | 1          | 37       | Stemper, Jack M. -----         | 2          | 30       |
| 410 S. Saddle Cr. Rd., Omaha   |            |          | 618 Doctors Bldg., Omaha            |            |          | 4740 "A" St., Lincoln          |            |          |
| Schain, Richard J. -----       | 1          | 37       | Skoog-Smith, Anton W. ---           | 1          | 37       | Stevenson, B. M. -----         | 9          | 5        |
| Nebr. Psychiatric Inst., Omaha |            |          | 839 So. 93rd, Omaha                 |            |          | 211 W. 33rd, Kearney           |            |          |
| Schenken, John R. -----        | 1          | 37       | Skworcow, George -----              | 2          | 30       | Stevenson, Edward -----        | 11         | 31       |
| Methodist Hosp., Omaha         |            |          | V. A. Hosp., Lincoln                |            |          | 108 S. Vine, North Platte      |            |          |
| Scherer, Robert H. -----       | 4          | 13       | Slabaugh, Robert A. -----           | 1          | 37       | Stewart, Frank A. -----        | 2          | 30       |
| West Point                     |            |          | 8601 W. Dodge Rd., Omaha            |            |          | 2133 Winthrop Rd., Lincoln     |            |          |
| Schlietemeier, J. P. -----     | 1          | 37       | Slavik, Edward R. -----             | 1          | 37       | Stewart, Geo. J. -----         | 4          | 32       |
| 1131 So. 99th, Omaha           |            |          | 8422 W. Center Rd., Omaha           |            |          | Box 408, Norfolk               |            |          |
| Schmitz, Gerhard -----         | 12         | 47       | Sloss, Pierce T. -----              | 9          | 22       | Stewart, H. C. -----           | 3          | 39       |
| 118 W. 18th, Scottsbluff       |            |          | 1310 W. Charles, Grand Island       |            |          | Pawnee City                    |            |          |
| Schmitz, Wm. H., Jr. -----     | 1          | 37       | Slunicko, Jules A. -----            | 1          | 37       | Stivrins, Kazimirs -----       | 2          | 30       |
| 611 City Natl. Bank, Omaha     |            |          | 5607 So. 77th Ralston               |            |          | 3145 "O" St., Lincoln          |            |          |
| Schmitz, W. H., Sr. -----      | 1          | 37       | Slutzky, Ben -----                  | 1          | 37       | Stivrins, Patricia Cole ---    | 2          | 30       |
| 611 City Natl. Bank, Omaha     |            |          | 5009 Nicholas St., Omaha            |            |          | 3145 "O" St., Lincoln          |            |          |
| Scholz, Jack V. -----          | 9          | 15       | Smith, Arthur L., Jr. -----         | 2          | 30       | Stone, F. P. -----             | 2          | 30       |
| Cozad                          |            |          | 510 Anderson Bldg., Lincoln         |            |          | 2300 So. 13th, Lincoln         |            |          |
| Schreiner, Gilbert C. -----    | 1          | 37       | Smith, Arthur L. Sr. -----          | 2          | 30       | Stonecypher, D. D., Jr. ---    | 2          | 28       |
| 3929 Harney, Omaha             |            |          | 510 Anderson Bldg., Lincoln         |            |          | Nebraska City                  |            |          |
| Schultz, Lloyd -----           | 1          | 37       | Smith, Clifford L. -----            | 1          | 37       | Stoner, Maurice E. -----       | 1          | 37       |
| 325 Doctors Bldg., Omaha       |            |          | 506 Center Bldg., Omaha             |            |          | 628 Med. Arts, Omaha           |            |          |
| Schutz, John C. -----          | 3          | 28       | Smith, Dorothy I. -----             | 1          | 37       | Stout, Kenneth C. -----        | 10         | 49       |
| Tecumseh                       |            |          | U. of N. Hosp. Omaha                |            |          | Benkelman                      |            |          |
| Schutser, Ulysses -----        | 12         | 47       | Smith, Edward J. -----              | 1          | 37       | Stover, Lee -----              | 2          | 30       |
| 2805 6th Ave., Scottsbluff     |            |          | 403 Center Bldg., Omaha             |            |          | 1701 So. 17th, Lincoln         |            |          |
| Schwedhelm, A. J. -----        | 4          | 32       | Smith, Fav -----                    | 10         | 49       | Strader, R. M. -----           | 2          | 30       |
| 13th & Nebraska, Norfolk       |            |          | 801 So. 52nd, No. 2013, Omaha       |            |          | 2526 "A" St., Lincoln          |            |          |
| Schwertley, F. J. (Life) ---   | 1          | 37       | Smith, Francis D. -----             | 1          | 37       | Strough, LaVern C. -----       | 1          | 37       |
| 614 Barker Bldg., Omaha        |            |          | U. of N. College of Medicine, Omaha |            |          | Nebr. Psychiatric Inst., Omaha |            |          |
| Scott, Joseph C. -----         | 1          | 37       | Smith, Harold C., Jr. -----         | 5          | 16       | Stryker Robert M. -----        | 1          | 37       |
| Univ. of Nebr., Omaha          |            |          | 1835 E. Military, Fremont           |            |          | 8258 Hascall, Omaha            |            |          |
| Scott, Nathaniel C. -----      | 1          | 37       | Smith, Harold V. -----              | 9          | 5        | Sturdevant, Clinton E. ---     | 11         | 31       |
| 5914 No. 52nd, Omaha           |            |          | 211 W. 33rd, Kearney                |            |          | Evans Bldg., North Platte      |            |          |
| Scott, Paul M. -----           | 3          | 34       | Smith, John W. -----                | 1          | 37       | Suegang, F. P. -----           | 12         | 4        |
| Auburn                         |            |          | 3610 Dodge, Omaha                   |            |          | 515 Niobrara Ave., Alliance    |            |          |
| Scott-Miller, James R. ---     | 1          | 37       | Smith, L. R. -----                  | 9          | 5        | Sucha, Eugene L. -----         | 4          | 13       |
| 3929 Harney, Omaha             |            |          | 211 W. 33rd, Kearney                |            |          | West Point                     |            |          |
| Sehnert, Keith W. -----        | 2          | 30       | Smith, Richard D. -----             | 1          | 37       | Sucha, Merlin L. -----         | 5          | 12       |
| Dorsey Labs., Lincoln          |            |          | 111 Doctors Bldg., Omaha            |            |          | Schuyler                       |            |          |
| Seiver, C. P. (Life) -----     | 5          | 16       | Smith, Robert C. -----              | 10         | 1        | Sucha, W. L. (Life) -----      | 1          | 37       |
| 507 E. 6th, Fremont            |            |          | Box 276, Hastings                   |            |          | 4017 Page, Omaha               |            |          |
| Seng, O. L. -----              | 12         | 4        | Smith, Roy J. -----                 | 5          | 3        | Sullivan, James F. -----       | 1          | 37       |
| Box 150, Alliance              |            |          | Albion                              |            |          | 5212 Webster St., Omaha        |            |          |
| Seng, Willard G. -----         | 11         | 21       | Smith, Thomas T. -----              | 1          | 37       | Sullivan, M. M. (Life) ---     | 9          | 19       |
| Oshkosh                        |            |          | 8601 W. Dodge Rd., Omaha            |            |          | Spalding                       |            |          |
| Serbousek, Richard -----       | 8          | 25       | Sobota, Joseph E. -----             | 1          | 37       | Sundell, Ray -----             | 1          | 37       |
| Atkinson                       |            |          | 3019 Ames, Omaha                    |            |          | 8601 W. Dodge Rd., Omaha       |            |          |
| Serbousek, Stanley A. -----    | 12         | 35       | Sojka, Louis A. -----               | 5          | 43       | Surber, E. G. -----            | 4          | 32       |
| Chadron                        |            |          | 2413 23rd, Columbus                 |            |          | Box 225, Norfolk               |            |          |
| Shaffer, Harry D. -----        | 2          | 30       | Solomon, W. W. -----                | 1          | 37       | Svehla, Richard B. -----       | 1          | 37       |
| 724 Sharp Bldg., Lincoln       |            |          | 3024 No. 24th, Omaha                |            |          | 1418 Med. Arts, Omaha          |            |          |
| Shamberg, Alfred H. -----      | 12         | 10       | Sorensen, C. N. -----               | 12         | 47       | Swab, Chas. M. (Life) ---      | 1          | 37       |
| Kimball                        |            |          | 1801 Broadway, Scottsbluff          |            |          | 1316 Med. Arts, Omaha          |            |          |
| Shank, F. W. -----             | 10         | 49       | Sorensen, Robert -----              | 5          | 16       | Swab, Elizabeth M. (Life) -    | 1          | 37       |
| 310 W. 7th, McCook             |            |          | 1135 N. Oak St., Fremont            |            |          | 1316 Med. Arts, Omaha          |            |          |
| Shannon, D. D. -----           | 12         | 4        | Sorrell, Michael -----              | 3          | 28       | Swenson, Samuel A., Jr. ---    | 1          | 37       |
| 916 W. 10th, Alliance          |            |          | Tecumseh                            |            |          | 110 Doctors Bldg., Omaha       |            |          |
| Shapiro, Irving -----          | 1          | 37       | Soule, Mary A. -----                | 1          | 37       | Synhorst, Robert B. -----      | 2          | 30       |
| 2010 No. 66th, Omaha           |            |          | 442 Doctors Bldg., Omaha            |            |          | 903 Sharp Bldg., Lincoln       |            |          |
| Sharrar, Lynn -----            | 2          | 30       | Spencer, Berl -----                 | 11         | 21       | Taborsky, A. F. -----          | 2          | 30       |
| 719 Sharp Bldg., Lincoln       |            |          | Ogallala                            |            |          | 629 Stuart Bldg., Lincoln      |            |          |
| Shaughnessy, E. J. -----       | 11         | 31       | Spethman, Gerald -----              | 5          | 3        | Takenaga, R. T. -----          | 11         | 31       |
| 1111 W. 4th, No. Platte        |            |          | Albion                              |            |          | 112 E. "C," No. Platte         |            |          |
| Shaw, W. L. (Life) -----       | 10         | 1        | Spivey, C. D. (Life) -----          | 9          | 14       | Tamisiea, Jerry X. -----       | 1          | 37       |
| Reseda, Calif.                 |            |          | Anselmo                             |            |          | Methodist Hosp., Omaha         |            |          |
| Shearer, W. L. (Life) ---      | 1          | 37       | Srb, A. F. -----                    | 1          | 37       | Tanner, Frank H. -----         | 2          | 30       |
| St. Paul, Minn.                |            |          | 1719 So. 16th, Omaha                |            |          | 1835 S. Pershing Rd., Lincoln  |            |          |
| Shiffermiller, Floyd H. ---    | 8          | 25       | Srb, G. J. -----                    | 5          | 16       | Tanner, John W. -----          | 1          | 37       |
| Ainsworth                      |            |          | Dodge                               |            |          | 8712 Pacific, Omaha            |            |          |
| Shopp, Bryce G. -----          | 10         | 49       | St. Aubin, Paul M. -----            | 1          | 37       | Taylor, Bernie D. -----        | 11         | 31       |
| Imperial                       |            |          | 8128 Farnam, Omaha                  |            |          | 1214 West A. No. Platte        |            |          |
| Shramek, C. J. -----           | 1          | 37       | Stafford, G. E. -----               | 2          | 30       | Taylor, Bowen E. -----         | 2          | 30       |
| 511 Redick Tower, Omaha        |            |          | 800 So. 13th, Lincoln               |            |          | 3145 "O" St., Lincoln          |            |          |
| Shreck, H. W. -----            | 10         | 1        | Staley, Sanford O. -----            | 9          | 5        | Taylor, H. A. (Life) -----     | 2          | 30       |
| 422 No. Hastings, Hastings     |            |          | 11 W. 31st, Kearney                 |            |          | 4728 St. Paul, Lincoln         |            |          |
| Sievers, Rudolph -----         | 5          | 51       | Stappenbeck, Alfred P. ---          | 3          | 44       | Taylor, R. J. -----            | 1          | 37       |
| Blair                          |            |          | Humboldt                            |            |          | 4601 So. 50th, Omaha           |            |          |
| Simanek, Geo. F. (Life) ---    | 1          | 37       | Starr, Philip H. -----              | 1          | 37       | Taylor, Robert W. -----        | 3          | 20       |
| Colorado Springs, Colo.        |            |          | 509 Doctors Bldg., Omaha            |            |          | 108 So. 6th, Beatrice          |            |          |
| Simic, Wm. J. -----            | 10         | 24       | Statton, R. F. -----                | 2          | 30       | Taylor, Willis H., Jr. ---     | 1          | 37       |
| Alma                           |            |          | 702 Sharp Bldg., Lincoln            |            |          | 3807 Cuming, Omaha             |            |          |
| Simmons, Cecil -----           | 5          | 6        | Stearns, R. J. (Life) -----         | 1          | 37       | Teal, F. F. (Life) -----       | 2          | 30       |
| 4901 Mayberry, Omaha           |            |          | 2301 Ellison, Omaha                 |            |          | 2815 So. 37th, Lincoln         |            |          |
| Simmons, Eugene E. (Life) -    | 1          | 37       | Steenburg, E. A. -----              | 6          | 23       | Teal, Fritz -----              | 2          | 30       |
| 8322 No. 37th, Omaha           |            |          | Aurora                              |            |          | 2300 So. 13th, Lincoln         |            |          |
| Simon, Nathan -----            | 2          | 30       | Steenburg, E. K. -----              | 6          | 23       | Tennant, H. S. -----           | 4          | *        |
| 1701 "K" St., Lincoln          |            |          | Washington, D.C.                    |            |          | Stanton                        |            |          |
| Simonds, Francis (Life) ---    | 1          | 37       | Steenburg, Houtz G. -----           | 6          | 23       | Tenney, Lloyd E. -----         | 2          | 30       |
| 615 So. 38th, Omaha            |            |          | Aurora                              |            |          | 1025 Sharp Bldg., Lincoln      |            |          |
| Simons, Milton -----           | 1          | 37       | Steffens, L. C. -----               | 9          | 5        | Thayer, James E. -----         | 12         | 10       |
| 701 Doctors Bldg., Omaha       |            |          | 211 W. 33rd, Kearney                |            |          | Sidney                         |            |          |
| Sinnott, John J. -----         | 1          | 37       | Stehl, C. H. L. -----               | 4          | 32       | Therien, R. C. -----           | 1          | 37       |
| 4601 So. 50th, Omaha           |            |          | Box 902, Norfolk                    |            |          | 701 Doctors Bldg., Omaha       |            |          |
|                                |            |          |                                     |            |          | Thierstein, S. T. -----        | 2          | 30       |
|                                |            |          |                                     |            |          | 6211 "O" St., Lincoln          |            |          |



| Name                          | Dist.<br>Code | Co.<br>Code | Name                        | Dist.<br>Code | Co.<br>Code | Name                         | Dist.<br>Code | Co.<br>Code |
|-------------------------------|---------------|-------------|-----------------------------|---------------|-------------|------------------------------|---------------|-------------|
| Thomas, Chas. W. (Life) ----- | 3             | 20          | Ward, Vernon -----          | 9             | 5           | Williams, Russell R. -----   | 1             | 37          |
| Wymore                        |               |             | 5 West 31st, Kearney        |               |             | 1412 Med. Arts, Omaha        |               |             |
| Thomas, Conrad -----          | 10            | 18          | Ware, Frederick -----       | 1             | 37          | Wilson, Carlyle E. -----     | 1             | 37          |
| Franklin                      |               |             | 720 Doctors Bldg., Omaha    |               |             | 3610 Dodge, Omaha            |               |             |
| Thomas, John M. -----         | 1             | 37          | Waring, F. Thomas -----     | 5             | 16          | Wilson, D. J. -----          | 1             | 37          |
| 3929 Harney, Omaha            |               |             | 203 IOOF Bldg., Fremont     |               |             | 1113 Med. Arts, Omaha        |               |             |
| Thomas, R. L. -----           | 2             | 30          | Warner, Ruth -----          | 2             | 30          | Wilson, Nat. J. -----        | 2             | 30          |
| Medical Village, Lincoln      |               |             | 909 Stuart Bldg., Lincoln   |               |             | V.A. Hospital, Lincoln       |               |             |
| Thompson, Dorothy -----       | 1             | 37          | Waters, Chester H., Jr. --- | 1             | 37          | Wilson, Rex W. -----         | 8             | 25          |
| Methodist Hosp., Omaha        |               |             | 209 So. 42nd, Omaha         |               |             | O'Neill                      |               |             |
| Thompson, John C. -----       | 2             | 30          | Waters, Chester H., Sr. --- | 1             | 37          | Wilson, Richard B. -----     | 1             | 37          |
| 307 So. 16th, Lincoln         |               |             | (Life)                      |               |             | Univ. Hosp., Omaha           |               |             |
| Thompson, John R. -----       | 2             | 30          | 843 Fairacres, Omaha        |               |             | Wisman, Jack -----           | 11            | 31          |
| U. of N. Student Health       |               |             | Waters, Robert W. -----     | 8             | 25          | 715 So. Jeffers, No. Platte  |               |             |
| Center, Lincoln               |               |             | O'Neill                     |               |             | Wittson, Cecil L. -----      | 1             | 37          |
| Thompson, Lynn W. -----       | 1             | 37          | Watke, Fred M. (Life) ---   | 1             | 37          | U. of N. Col. of Med.,       |               |             |
| 526 Doctors Bldg., Omaha      |               |             | 4624 Davenport, Omaha       |               |             | Omaha                        |               |             |
| Thorough, Paul H. -----       | 2             | 30          | Watland, Dean C. -----      | 1             | 37          | Wood, Maynard A. -----       | 2             | 30          |
| 950 So. Cotner, Lincoln       |               |             | 8601 W. Dodge Rd.,          |               |             | 3145 "O" St., Lincoln        |               |             |
| Tibbels, R. H. -----          | 5             | 6           | Omaha                       |               |             | Woodard, J. M. -----         | 6             | 23          |
| Oakland                       |               |             | Watson, Don P. -----        | 9             | 22          | Aurora                       |               |             |
| Tollefson, Richard L. -----   | 4             | 29          | 704 W. Koenig, Gr. Island   |               |             | Woodin, J. G. (Life) -----   | 9             | 22          |
| Wausa                         |               |             | Watson, Donald -----        | 8             | 35          | 1823 N. Park, Gr. Island     |               |             |
| Tollman, J. P. -----          | 1             | 37          | Gordon                      |               |             | Woodruff, Bradley -----      | 9             | 22          |
| U. of N. College of           |               |             | Watson, E. A. -----         | 9             | 22          | 1310 W. Charles              |               |             |
| Medicine, Omaha               |               |             | 710 W. Koenig, Gr. Island   |               |             | Grand Island                 |               |             |
| Tomhave, Wesley G. -----      | 2             | 30          | Watson, E. A. -----         | 9             | 15          | Woodward, James (Life) ---   | 2             | 30          |
| 307 So. 16th St., Lincoln     |               |             | Lexington                   |               |             | 910 Sharp Bldg., Lincoln     |               |             |
| Toren, Richard C. -----       | 2             | 30          | Watson Victor R. -----      | 6             | 48          | Worthman, H. W. -----        | 2             | 8           |
| 135 So. 14th, Lincoln         |               |             | Seward                      |               |             | Louisville                   |               |             |
| Tranisi, Carl P. -----        | 1             | 37          | Wax, James I. -----         | 1             | 37          | Worthman, John -----         | 4             | 13          |
| 9015 Arbor, Omaha             |               |             | 118 So. 88th, Omaha         |               |             | West Point                   |               |             |
| Travnicek, F. G. -----        | 7             | 45          | Way, Charles W. -----       | 6             | 46          | Wright, W. D. -----          | 1             | 37          |
| Wilbur                        |               |             | Wahoo                       |               |             | 302 Doctors Bldg., Omaha     |               |             |
| Treptow, Kenneth R. -----     | 5             | 33          | Weaver, Walt -----          | 2             | 30          | Wright, Wm. E. -----         | 4             | 29          |
| Central City                  |               |             | 512 1st Natl. Bank, Lincoln |               |             | Creighton                    |               |             |
| Troester, O. M. (Life) -----  | 6             | 23          | Webb, Adin H. -----         | 2             | 30          | Wullschlegler, Otto -----    | 4             | 32          |
| Hampton                       |               |             | 1130 "H" St., Lincoln       |               |             | 13th & Nebraska, Norfolk     |               |             |
| Troester, Otto S. -----       | 2             | 30          | Weber, C. R. -----          | 10            | 1           | Wurl, Otto A. -----          | 1             | 37          |
| 924 Sharp Bldg., Lincoln      |               |             | 612 W. 6th, Hastings        |               |             | 3610 Dodge, Omaha            |               |             |
| Troia, Carl J. -----          | 1             | 37          | Webman, Arnold I. -----     | 2             | 30          | Wycoff, Rav S. -----         | 9             | 15          |
| 1227 Med. Arts, Omaha         |               |             | 3210 So. 28th, Lincoln      |               |             | Lexington                    |               |             |
| Truhlsen, Stanley M. -----    | 1             | 37          | Webster, F. S. -----        | 2             | 30          | Wyrens, Raymond J. -----     | 1             | 37          |
| 710 Doctors Bldg., Omaha      |               |             | 1000 So. 13th, Lincoln      |               |             | 8601 W. Dodge Rd.,           |               |             |
| Tucker, J. Guy -----          | 7             | 50          | Weekes, Thomas L. -----     | 2             | 38          | Omaha                        |               |             |
| Alexandria                    |               |             | Nebraska City               |               |             | Yaw, Elwood E. -----         | 10            | 49          |
| Tunakan, Bulent -----         | 1             | 37          | Weeks, David S. -----       | 1             | 37          | Imperial                     |               |             |
| Nebr. Psychiatric Inst.,      |               |             | 8258 Hascall, Omaha         |               |             | Yoachim, Wm. P. -----        | 7             | 27          |
| Omaha                         |               |             | Wegner, E. S. -----         | 2             | 30          | Fairbury                     |               |             |
| Turner, Robert -----          | 1             | 37          | 724 Sharp Bldg., Lincoln    |               |             | Yost, Howard -----           | 5             | 16          |
| 8420 W. Center Rd., Omaha     |               |             | Weiler, Leo F. -----        | 10            | 1           | 215 E. 22nd, Fremont         |               |             |
| Tyson, R. W. -----            | 2             | 8           | 204 Foote Bldg., Hastings   |               |             | Yost, J. G. -----            | 10            | 1           |
| Murray                        |               |             | Weingarten, William H. ---  | 1             | 37          | 608 W. 6th, Hastings         |               |             |
| Underriner, Robert E. -----   | 1             | 37          | 111 Doctors Bldg., Omaha    |               |             | Young, Geo. A. -----         | 1             | 37          |
| 5827 No. 60th, Omaha          |               |             | Welch, Geo. L. -----        | 10            | 1           | 1317 Ridgewood, Omaha        |               |             |
| Underwood, Geo. R. -----      | 2             | 30          | 12th St. & Baltimore,       |               |             | Youngman, Robert A. -----    | 6             | 46          |
| 5826 "J" St., Lincoln         |               |             | Hastings                    |               |             | Cedar Rapids, Ia.            |               |             |
| Va Verka, James W. -----      | 1             | 37          | Weldon, R. C. -----         | 2             | 38          | Zahler, F. Marshall, Jr. --- | 1             | 37          |
| 219 Med. Arts, Omaha          |               |             | Nebraska City               |               |             | 60th and Ogden, Omaha        |               |             |
| Verges, C. J. (Life) -----    | 4             | 32          | Wendt, Bernard F. -----     | 2             | 30          | Zarbano, Sebastian -----     | 1             | 37          |
| Box 117, Norfolk              |               |             | 735 So. 56th, Lincoln       |               |             | 512 Center Bldg., Omaha      |               |             |
| Verges, Val C. -----          | 4             | 32          | Wengert, D. B. -----        | 5             | 16          | Zastera, J. R. -----         | 1             | 37          |
| Box 279, Norfolk              |               |             | 640 N. "H" St., Fremont     |               |             | 816 Med. Arts, Omaha         |               |             |
| Vetter, J. G. -----           | 1             | 37          | Weston, Irving E. -----     | 2             | 30          | Zeman, E. D. -----           | 2             | 30          |
| 721 W.O.W. Bldg., Omaha       |               |             | 735 So. 56th, Lincoln       |               |             | 1145 South, Lincoln          |               |             |
| Vickerv, Robert D. -----      | 1             | 37          | Weyhrauch, William -----    | 2             | 30          | Ziegler, R. G. -----         | 11            | 31          |
| 818 Doctors Bldg., Omaha      |               |             | 3145 "O" St., Lincoln       |               |             | 1111 W. 4th, No. Platte      |               |             |
| Vlach, C. J. -----            | 4             | 9           | Whitla, Fay E. -----        | 2             | 30          | Zikmund, E. T. -----         | 5             | 33          |
| Hartington                    |               |             | 3620 "L" St., Lincoln       |               |             | Central City                 |               |             |
| Waddell, J. C. (Life) -----   | 3             | 20          | Whitlock, H. H. -----       | 2             | 30          | Zimmer, Clarence -----       | 7             | 45          |
| 114 So. 6th, Beatrice         |               |             | 805 Sharp Bldg., Lincoln    |               |             | Friend                       |               |             |
| Waddell, W. W. -----          | 3             | 20          | Whitney, Mark L. -----      | 8             | 25          | Zlomke, Wayne -----          | 9             | 19          |
| 114 So. 6th, Beatrice         |               |             | Lynch                       |               |             | Ord                          |               |             |
| Waggeners, J. T. (Life) ---   | 3             | 20          | Wiedman, J. G. -----        | 2             | 30          | Zoucha, Adam E. -----        | 1             | 37          |
| Adams                         |               |             | 339 No. Cotner, Lincoln     |               |             | 4320 So. 24th, Omaha         |               |             |
| Waggner, Ronald E. -----      | 1             | 37          | Wiedman, Wilbur G. -----    | 2             | 30          | Zukaitis, Raymond R. -----   | 1             | 37          |
| Methodist Hosp., Omaha        |               |             | 135 So. 14th, Lincoln       |               |             | 7631 Main, Ralston           |               |             |
| Wagner, Daniel -----          | 1             | 37          | Wigton, Robert S. -----     | 1             | 37          |                              |               |             |
| 540 Center Bldg., Omaha       |               |             | 105 So. 49th, Omaha         |               |             |                              |               |             |
| Wagner, Loyd -----            | 10            | 1           | Wilcox, C. W. -----         | 9             | 14          |                              |               |             |
| Mary Lanning Hosp.,           |               |             | Ansley                      |               |             |                              |               |             |
| Hastings                      |               |             | Wilcox, Malcolm B. -----    | 9             | 5           |                              |               |             |
| Waldbaum, Milton G. -----     | 1             | 37          | 214 W. 25th, Kearney        |               |             |                              |               |             |
| 1512 So. 60th, Omaha          |               |             | Wildhaber, W. T. -----      | 3             | 20          |                              |               |             |
| Walker, H. H. (Life) -----    | 11            | 31          | 710 E. Court, Beatrice      |               |             |                              |               |             |
| Loma Linda, Calif.            |               |             | Wiley, Stuart P. -----      | 12            | 48          |                              |               |             |
| Walker, Hiram R. -----        | 10            | 24          | 900 "N" St., Gering         |               |             |                              |               |             |
| 211 W. 33rd, Kearney          |               |             | Wilhelmj, C. M., Jr. -----  | 1             | 37          |                              |               |             |
| Wallace, Hobart E. -----      | 2             | 30          | 634 Doctors Bldg. Omaha     |               |             |                              |               |             |
| 5145 "O" St., Lincoln         |               |             | Wilkie, Louis J. -----      | 1             | 37          |                              |               |             |
| Wallace, Stephen E. -----     | 6             | 46          | 816 Med. Arts, Omaha        |               |             |                              |               |             |
| Wahoo                         |               |             | Wilkinson, Donald E. -----  | 12            | 4           |                              |               |             |
| Walling, Gail E. -----        | 1             | 37          | 524 Box Butte Ave.,         |               |             |                              |               |             |
| 701 Doctors Bldg., Omaha      |               |             | Alliance                    |               |             |                              |               |             |
| Walsh, E. M. -----            | 1             | 37          | Williams, A. Ruth -----     | 1             | 37          |                              |               |             |
| 5002 Dodge, Omaha             |               |             | 612 Omaha Loan, Omaha       |               |             |                              |               |             |
| Waltemath, Glenn -----        | 11            | 31          | Williams, C. R. -----       | 2             | 38          |                              |               |             |
| 1214 W. "A" St.,              |               |             | Syracuse                    |               |             |                              |               |             |
| North Platte                  |               |             | Williams, Jon T. -----      | 2             | 30          |                              |               |             |
| Walvoord, Carl A. -----       | 1             | 37          | 435 So. 16th, Lincoln       |               |             |                              |               |             |
| 4052 Grand, Omaha             |               |             | Williams, Martin P. -----   | 6             | 46          |                              |               |             |
| Wanek, Frank W. -----         | 8             | 35          | Ashland                     |               |             |                              |               |             |
| Gordon                        |               |             | Williams, Perry T. -----    | 1             | 37          |                              |               |             |
|                               |               |             | 9015 Arbor St., Omaha       |               |             |                              |               |             |

#### 1965 DECEASED MEMBERS

|                              |   |    |
|------------------------------|---|----|
| Andersen, M. C. -----        | 1 | 37 |
| Omaha                        |   |    |
| October 3, 1965              |   |    |
| Krush, Thaddeus P. -----     | 1 | 37 |
| Omaha                        |   |    |
| October 19, 1965             |   |    |
| MacQuiddy, E. L., Jr. -----  | 1 | 37 |
| Omaha                        |   |    |
| May 18, 1965                 |   |    |
| McGee, Harry E. (Life) ----- | 1 | 37 |
| Omaha                        |   |    |
| February 6, 1965             |   |    |
| Simpson, John E. (Life) ---  | 1 | 37 |
| Omaha                        |   |    |
| December 16, 1964            |   |    |
| Stanard, J. T. (Life) -----  | 6 | 48 |
| Seward                       |   |    |
| June 7, 1965                 |   |    |
| Sullivan, H. T. -----        | 1 | 37 |
| Omaha                        |   |    |
| June 16, 1965                |   |    |
| Welch, J. S. (Life) -----    | 2 | 30 |
| Rochester, Minn.             |   |    |
| March, 1965                  |   |    |



# 1965 Membership Roster Nebraska State Medical Association

## FIRST DISTRICT LEROY LEE, Councilor

### DOUGLAS

#### OMAHA—

(681 + Two Digits Following Address = Zip Code for Omaha)

- Abts, A. W.  
7906 Dodge St. (14)
- Adkins, Nathan  
622 Doctors Bldg. (31)
- Aftonomos, Lefkos T.  
5404 Ames Ave. (04)
- Aita, John A.  
2302 No. 55th St. (04)
- Albertson, L. C.  
4118 No. 78th St. (34)
- Alley, John R.  
434 Doctors Bldg. (31)
- Allen, John F. (Life)  
La Jolla, Calif.
- Alliband, George T.  
234 Doctors Bldg. (31)
- Allison, George J.  
Ralston, Nebr. (68051)
- Andersen, Alfred C.  
4826½ So. 24th St. (07)
- Andersen, M. C.  
(Deceased 10-3-65)
- Anderson, Harley E.  
5002 Davenport (32)
- Anderson, Lawrence L.  
1336 Med. Arts Bldg. (02)
- Angle, Carol R.  
418 So. 82nd St. (14)
- Angle, Wm. D.  
418 So. 82nd St. (14)
- Antony, Arthur C.  
5715 Military Ave. (04)
- Armbrust, Walter  
5401 Leavenworth (06)
- Arrasmith, K. Don  
3610 Dodge St. (31)
- Austria, G. O.  
2321 M St. (07)
- Baca, D. E.  
2580 So. 90th St. (24)
- Bach, Stanley M.  
625 Doctors Bldg. (31)
- Bantlin, C. F.  
6558 Minne Lusa Blvd. (12)
- Bare, James E.  
120 W. 2nd. Papillion  
(68046)
- Barmore, John L.  
8601 W. Dodge Rd. (14)
- Barry, M. W.  
1416 Med. Arts Bldg. (02)
- Barry, Richard V.  
1519 So. 55th St. (06)
- Barta, Frank R.  
303 So. 56th St. (32)
- Bartek, Julius G.  
619 Barker Bldg. (02)
- Bartholow, George  
Nebr. Psychiatric Inst. (05)
- Baum, Cletus J.  
403 Center Bldg. (05)
- Baumgartner, J. C.  
2533 So. 90th St. (24)
- Beher, Meyer  
301 Doctors Bldg. (31)
- Beitenman, Edward  
Nebr. Psychiatric Inst. (05)
- Bendorf, D. H.  
5434 No. 42nd St. (11)
- Beran, Russell E.  
3610 Dodge St. (31)
- Berenkey, Kornel M.  
Creighton Univ. (02)
- Best, R. Russell  
609 Doctors Bldg. (31)
- Bevilacqua, Lee C.  
4105 Harrison (47)
- Bisgard, J. Dewey  
542 Doctors Bldg. (31)
- Black, Albert S., Jr.  
1414 Med. Arts Bldg. (02)
- Reicher, Jerome E.  
2602 J St. (07)
- Blodig, John L.  
2223 So. 85th Ave. (24)
- Boelter, Wm. C.  
534 Doctors Bldg. (31)
- Bohl, Daniel G.  
534 Doctors Bldg. (31)
- Boler, Thomas D. (Life)  
420 So. 35th St. (31)
- Bonniwell, Chas. M.  
8613 No. 30th St. (12)
- Booth, Richard  
St. Joseph's Hosp. (08)
- Borghoff, Joseph J.  
7906 Dodge St. (14)
- Brannen, Chas. F.  
1901 Missouri Ave. (07)
- Brazer, J. G.  
5114 Lafayette (32)
- Bressman, Chas. M.  
8613 No. 30th St. (12)
- Brett, Dale Edward  
609 Doctors Bldg. (31)
- Brinkman, H. H.  
5519 Military Ave. (04)
- Brodkey, M. H.  
320 Med. Arts Bldg. (02)
- Brody, Alfred W.  
Creighton Univ. (02)
- Brown, Arthur C.  
St. Catherine's Hosp. (08)
- Browne, Kenneth M.  
924 Med. Arts Bldg. (02)
- Brush, John H.  
1329 Med. Arts Bldg. (02)
- Bucholz, Donald J.  
3610 Dodge St. (31)
- Bunting, Richard  
Clarkson Hosp. (05)
- Burney, Dwight W., Jr.  
609 Doctors Bldg. (31)
- Burns, B. C., Sr.  
421 Farm Credit Bldg. (02)
- Burns, B. C., Jr.  
407 So. 86th St. (14)
- Cameron, O. J.  
1520 Med. Arts Bldg. (02)
- Carnazzo, S. J.  
723 Barker Bldg. (02)
- Carp, Oscar  
515 Med. Arts Bldg. (02)
- Carter, James G.  
8601 W. Dodge Rd. (14)
- Cassidy, W. A.  
200 No. 55th St. (32)
- Catania, Nancy  
820 Med. Arts Bldg. (02)
- Christensen, J. B.  
1329 Med. Arts Bldg. (02)
- Christlieb, J. M.  
7021 Bellevue Blvd. (47)
- Clark, W. M.  
1113 Redick Tower (02)
- Cleaver, Edgar  
6104½ Military (04)
- Clemens, Richard P.  
7324 Maple (34)
- Cochran, Robert M.  
452 Aquila Court (02)
- Coe, John D.  
409 Doctors Bldg. (31)
- Comine, J. J.  
412 Med. Arts Bldg. (02)
- Connolly, E. A.  
502 Med. Arts Bldg. (02)
- Connor, P. James  
628 Med. Arts Bldg. (02)
- Connor, E. K.  
317 Doctors Bldg. (31)
- Cook, Lyman J. (Life)  
1612 Med. Arts Bldg. (02)
- Cotton, Walter T.  
834 Doctors Bldg. (31)
- Courtnev, J. E.  
730 City Natl. Bank  
Bldg. (02)
- Crofoot, Michael  
542 Doctors Bldg. (31)
- Crotty, Richard Q.  
634 Doctors Bldg. (31)
- Davis, Allan  
422 Doctors Bldg. (31)
- Davis, Herbert H. (Life)  
P.O. Box 1411  
Peony Park Station (14)
- Davis, J. Calvin (Life)  
425 Aquila Court (02)
- Davis, J. Calvin, III  
325 Doctors Bldg. (31)
- Davis, John B.  
734 Doctors Bldg. (31)
- Davis, Neal  
416 So. 93rd St. (14)
- DeLanney, L. A. (Life)  
Walnut Creek, Calif.
- Dendinger, W. M.  
402 Aquila Court (02)
- Denker, John C.  
Valley, Nebr. (68064)
- Dewey, John L.  
104 So. 39th St. (31)
- Dickerson, Wm. J.  
3610 Dodge St. (31)
- Dinsmore, James  
209 So. 42nd St. (31)
- Donahue, Francis D.  
1204 Med. Arts Bldg. (02)
- Donelan, James P.  
Guarantee Mutual Life  
Ins. Co. (14)
- Donelan, James S.  
8601 W. Dodge Rd. (04)
- Donovan, James M.  
4815 Dodge St. (32)
- Doolittle, H. H.  
2580 So. 90th (24)
- Dowell, D. A.  
816 Med. Arts Bldg. (02)
- Drdla, Theodore  
460 Aquila Court (02)
- Drozda, Joseph P.  
1315 Deer Park Rd. (08)
- Dunlap, James  
711 Med. Arts Bldg. (02)
- Dunn, D. E.  
8053 Blondo Plaza (34)
- Dunn, F. Lowell  
847 Fairacres Rd. (32)
- Dutch, Stephen J.  
Nebr. Psychiatric Inst. (05)
- Dwerak, Henry L.  
503 Center Bldg. (05)
- Dyer, J. L.  
1508 So. 79th St. (24)  
(Dodge Co.)
- Eagle, Frank L.  
1620 Med. Arts Bldg. (02)
- Eaton, Louise  
Nebr. Psychiatric Inst. (05)
- Eaton, Merrill T.  
Nebr. Psychiatric Inst. (05)
- Egan, Richard L.  
Creighton Univ. Sc. of  
Med. (02)
- Egan, Wm. J.  
456 Aquila Court (02)
- Elston, Harry R.  
4930 So. 24th St. (07)
- Elston, James H.  
1107 Med. Arts Bldg. (02)
- Endres, G. L.  
5815 Ohio (04)
- Engdahl, Wallace E.  
8613 No. 30th St. (12)
- Ewing, John D.  
1622 Med. Arts Bldg. (02)
- Faier, Robert G.  
1528 Med. Arts Bldg. (02)
- Fangman, Richard J.  
5002 Dodge St. (32)
- Farrell, Chester H.  
721 Med. Arts Bldg. (02)
- Farrell, Robert F. (Life)  
San Francisco, Calif.
- Fellman, A. C.  
309 Doctors Bldg. (31)
- Fellows, Chas. E.  
132nd & L St.  
Millard (68043)
- Fieber, Warren W.  
Univ. of Nebr. (05)
- Filkins, John C.  
521 Doctors Bldg. (31)
- Finlayson, Alister I.  
924 Med. Arts Bldg. (02)
- Fisher, Eugene  
9006 Ohio (34)
- Fitch, Donald Max  
Univ. of Nebr. Hosp. (05)
- Fitzgibbons, Robert J.  
1412 Med. Arts Bldg. (02)
- Fitzmaurice, Francis  
2820 So. 32nd Ave. (05)
- Fleishman, Max  
260 Aquila Court (02)
- Fleming, E. F.  
3650 Burt St. (31)
- Foley, John F.  
Univ. Hosp. (05)
- Foster, Miles E., Jr.  
Sycamore Farm  
Waterloo, Nebr. (68069)
- Francis, Marvin B.  
201 E. 20th Ave.,  
Bellevue (68005)
- Frank, Muriel N.  
Methodist Hosp. (31)
- Freed, Albert E.  
8019 W. Dodge Rd. (14)
- Friedlander, Milton  
New Rochelle, N.Y.
- Frost, Dwight M.  
3240 Maplewood Blvd. (34)
- Gardiner, J. F.  
628 Med. Arts Bldg. (02)
- Gatewood, John W.  
8601 W. Dodge Rd. (14)
- Gedgoud, John L.  
3925 Dewey (05)
- George, John H.  
410 So. Saddle Cr. Rd. (06)
- Gibbs, Gordon E.  
Univ. of Nebr. College  
of Med. (05)
- Giffen, Horace K.  
432 So. 39th St. (31)
- Gifford, Harold  
1620 Med. Arts Bldg. (02)
- Giles, Wm. F.  
915 Med. Arts Bldg. (02)
- Gillies, Ray O., Jr.  
631 Med. Arts Bldg. (02)
- Gleeson, John J. (Life)  
2307 So. 33rd St. (05)
- Glow, Donald Thomas  
3925 Dewey Ave. (05)
- Goodrich, Guy W.  
1107 So. 79th St. (24)
- Graham, William E.  
8721 Shamrock Rd. (14)
- Graves, Harris B.  
434 Doctors Bldg. (31)
- Greenberg, A. (Life)  
320 Med. Arts Bldg. (02)
- Greenberg, M. M.  
1421 Dodge St. (02)
- Greenberg, Richard S.  
1421 Dodge St. (02)
- Greene, Arthur M.  
501 Doctors Bldg. (31)
- Greene, Earl G., Jr.  
3703 Mormon (12)
- Grier, John J.  
1107 Med. Arts Bldg. (02)
- Grier, M. E.  
828 Med. Arts Bldg. (02)
- Grier, Thomas  
828 Med. Arts Bldg. (02)
- Grissom, Robert L.  
Univ. of Nebr. College  
of Med. (05)
- Gross, Joseph F.  
1307 Med. Arts Bldg. (02)
- Gurnett, Thos. J.  
527 Med. Arts Bldg. (02)
- Haller, Michael  
4105 Harrison (47)
- Hamilton, Cliff S.  
535 Doctors Bldg. (31)
- Hamsa, W. R.  
609 Doctors Bldg. (31)
- Hanisch, Louis E.  
320 Doctors Bldg. (31)
- Hankins, Chas. R.  
823 Doctors Bldg. (31)
- Hansen, Clifford H.  
209 Doctors Bldg. (31)
- Hardy, C. C. (Life)  
Willoughby, Ohio
- Hartigan, John  
527 Med. Arts Bldg. (02)
- Hartmann, Clarence  
6025 Ogden (04)
- Harvey, Donald  
412 So. Saddle Cr. Rd. (06)
- Hasl, Robert F.  
1016 Med. Arts Bldg. (02)
- Hawkins, Robert E.  
8601 W. Dodge Rd. (14)
- Heaney, Robert  
Creighton Univ. (31)
- Heffron, John F.  
2580 So. 90th St. (24)
- Henderson, Harry C.  
105 So. 49th St. (32)
- Henn, Mary J.  
Univ. of Nebr. Col.  
of Med. (05)
- Hession, John F.  
7324 Maple St. (34)
- Heumann, J. M. F. (Life)  
6110 Military Ave. (04)
- Heywood, Leo T.  
828 Med. Arts Bldg. (02)
- Hickey, Charles (Life)  
Bennington, Nebr. (68007)

Hill, F. C.  
636 Med. Arts Bldg. (02)

Hodgson, Paul E.  
Univ. Hosp. (05)

Hoffman, Kenneth C.  
Immanuel Hosp. (11)

Holcombe, Robt. C.  
3610 Dodge St. (31)

Holden, W. J.  
316 Med. Arts Bldg. (02)

Hood, L. Thomas  
209 So. 42nd St. (31)

Hoody, Steve  
4951 Center St. (06)

Horwich, Joseph M.  
717 Kilpatrick Bldg. (31)

Hotz, Harley  
1013 Redick Tower (02)

Howard, M. C.  
1776 No. 52nd St. (04)

Hruby, Allan J.  
3169 Leavenworth (05)

Huhhard, Theodore F.  
1005 Meadow Rd. (54)

Hughes, Leo V.  
3610 Dodge St. (31)

Hughes, W. T.  
Gretna (68028)

Hull, Wayne M. (Life)  
St. Petersburg, Florida

Hungerford, Wm. E.  
1904 Spencer St. (10)

Hunt, H. B.  
Univ. of Nebr. (05)

Hyde, John R.  
540 Center Bldg. (05)

Iwerson, Frank J.  
1307 Med. Arts Bldg. (02)

Jackson, Donald R.  
8601 W. Dodge Rd. (14)

James, Lawrence R.  
728 Doctors Bldg. (31)

Jaros, S. H.  
104 So. 39th St. (31)

Jenkins, Harry  
1113 Redick Tower (02)

Jensen, Werner P.  
3568 Dodge St. (31)

Jensen, William  
9006 Ohio (34)

Jernstrom, Roger  
410 So. Saddle Cr. Rd. (06)

Johnson, George N.  
3569 Leavenworth (05)

Johnson, Gordon F.  
728 Doctors Bldg. (31)

Johnson, Herman F. (Life)  
209 So. 42nd St. (31)

Johnson, J. A.  
602 Omaha L. & B.  
Assn. (02)

Johnson, Richard N.  
3932 So. 24th St. (07)

Johnson, Wm. H.  
2912 Manderson (11)

Jones, John  
Univ. of Nebr. Hosp. (05)

Jones, Robert Dale  
105 So. 49th St. (32)

Judd, J. H.  
234 Doctors Bldg. (31)

Jurgensen, Wm. W.  
9304 Leavenworth (24)

Kadavy, C. J. (Life)  
2703 So. 16th St. (08)

Kalin, John A.  
1909 No. 81st St. (14)

Kammandel, Henry  
416 Doctors Bldg. (31)

Karrer, F. William  
8601 W. Dodge Rd. (14)

Keegan, J. Jay (Life)  
669 No. 57th St. (32)

Kelley, J. Whitney  
1513 Med. Arts Bldg. (02)

Kelley, Wm. E.  
1319 Med. Arts Bldg. (02)

Kelly, Gerard  
816 Med. Arts Bldg. (02)

Kelly, James F., Jr.  
816 Med. Arts Bldg. (02)

Kelly, James F., Sr.  
816 Med. Arts Bldg. (02)

Kemp, Daniel  
2218 L. St. (07)

Kemp, Wm. T.  
3001 No. 16th St. (10)

Kennedy, John C.  
1520 Med. Arts Bldg. (02)

Kenney, Emmet M.  
Nebr. Psychiatric Inst. (05)

Kenney, Neil P.  
816 Med. Arts Bldg. (02)

Kirchner, John R.  
677 No. 59th St. (32)

Kirk, E. J.  
434 Aquila Court (02)

Klabenes, Frank J.  
234 Doctors Bldg. (02)

Klein, Robert J.  
1307 Med. Arts Bldg. (02)

Koszewski, Bohdan J.  
4002 So. 42nd St. (07)

Kovar, W. R.  
3610 Dodge St. (31)

Kovarik, James R.  
8601 W. Dodge Rd. (14)

Kratochvil, Bernard  
1307 Med. Arts Bldg. (02)

Kroupa, W. E.  
8601 W. Dodge Rd. (14)

Krush, Thaddeus P.  
(Deceased 10-19-65)

Kulesh, Morton H.  
302 Loveland Dr. (14)

Ladwig, Harold A.  
302 City Natl. Bank  
Bldg. (02)

Langdon, Edward  
823 Doctors Bldg. (31)

Langdon, Frederick J.  
3610 Dodge St. (31)

Langdon, Robert M.  
8601 W. Dodge Rd. (14)

Lanspa, Eugene F.  
4951 Center St. (06)

Larsen, Arthur L.  
701 Doctors Bldg. (31)

Latenser, John  
809 Doctors Bldg. (31)

Latta, C. Rex  
710 Doctors Bldg. (31)

Leahy, James J.  
1325 No. Saddle Cr. Rd. (32)

Lee, Leroy W.  
800 Doctors Bldg. (31)

Lehnhoff, Henry J.  
720 Doctors Bldg. (31)

Lemon, Henry M.  
Univ. of Nebr. Hosp. (05)

Lempka, Arnold W.  
502 Med. Arts Bldg. (02)

Lennox, G. B. (Life)  
2527 Patrick St. (11)

Levin, Hugh S.  
2305 So. 10th St. (08)

Lewis, Jack K.  
5015 Dodge St. (32)

Lewis, Kirk C.  
8613 No. 30th St. (52)

Lewis, Raymond G.  
5015 Dodge St. (32)

Lipp, Frank E. (Life)  
5812 Pierce St. (06)

Lombaro, Anthony J.  
3929 Harney (31)

Long, Robert S.  
8721 Shamrock Rd. (14)

Longo, Charles A.  
2227 Jefferson  
Bellevue, Nebr. (68805)

Longo, Joseph A.  
302 No. 22nd St. (02)

Look, Charles E.  
3610 Dodge St. (31)

Loomis, George W.  
720 Doctors Bldg. (31)

Lorincz, Albert B.  
Creighton Univ. (31)

Lovgren, Robert E.  
719 Doctors Bldg. (31)

Luhy, Robert J.  
828 Med. Arts Bldg. (02)

Lucas, J. F.  
815 W.O.W. Bldg. (02)

Luikart, Ralph  
708 Med. Arts Bldg. (02)

Lyman, E. D.  
1201 So. 42nd St. (05)

MacQuiddy, E. L., Jr.  
(Deceased 5-18-65)

Magid, Bernard  
201 Doctors Bldg. (31)

Mageria, Stephen L.  
209 Doctors Bldg. (31)

Magruder, Thomas G.  
1512 So. 60th St. (06)

Maillard, James A.  
527 Med. Arts Bldg. (02)

Malashock, Edward M.  
800 Doctors Bldg. (31)

Mangimelli, Samuel T.  
723 Barker Bldg. (02)

Margolin, J. Milton  
502 Med. Arts Bldg. (02)

Margolin, Morris (Life)  
502 Med. Arts Bldg. (02)

Marsh, P. Wayne  
Creighton Univ. (31)

Martin, Paul J.  
826 Med. Arts Bldg. (02)

Mauer, R. T.  
1520 Med. Arts Bldg. (02)

Maynard, James H.  
2505 No. 50th St. (04)

McArdle, G. Prentiss  
1215 Med. Arts Bldg. (02)

McAvin, J. S. (Life)  
Lutheran Hosp. (31)

McCarthy, Harry H.  
326 Med. Arts Bldg. (02)

McCarthy, J. D. (Life)  
1036 Med. Arts Bldg. (02)

McCaslin, Joseph  
6016 Ames Ave. (04)

McCleneghan, Sam (Life)  
Rt. 1, Valley, Nebr. (68064)

McCormick, Keith M.  
3610 Dodge St. (31)

McCrann, W. J. (Life)  
319 Med. Arts Bldg. (02)

McDermott, Arnold  
712 Med. Arts Bldg. (02)

McDonald, Raymond  
617 Med. Arts Bldg. (02)

McFadden, Harry W., Jr.  
701 Doctors Bldg. (31)

McGee, Harry E. (Life)  
(Deceased 2-6-65)

McGoogan, Leon S.  
8601 W. Dodge Rd. (14)

McIntire, Matilda S.  
602 So. 44th St. (05)

McIntire, W. C.  
3610 Dodge St. (31)

McKain, John M.  
2305 So. 10th St. (08)

McKinney, Daniel L.  
1012 Med. Arts Bldg. (02)

McLaughlin, C. W., Jr.  
409 Doctors Bldg. (31)

McLeay, John F.  
1118 Med. Arts Bldg. (02)

McMartin, W. J.  
603 City Natl. Bank  
Bldg. (02)

McMillan, Aaron M.  
2554 Wirt St. (11)

McMurtrey, George B.  
110 Doctors Bldg. (31)

McNamara, J. W.  
334 Doctors Bldg. (31)

McNamara, Lee T.  
334 Doctors Bldg. (31)

McWhorter, Clarence  
10711 Cedar (24)

Mead, Beverley  
St. Joseph's Hosp. (08)

Meissner, Richard  
215 Doctors Bldg. (31)

Melcher, Wm. C.  
10060 Miami (34)

Melcher, Wm. H. (Life)  
9232 Dorcas (24)

Menolascino, Frank J.  
2318 So. 102nd (34)

Mergens, D. N.  
6220 Maple (04)

Messer, Robert H.  
Univ. Hosp. (05)

Meyers, V. Wm.  
7328 Maple (34)

Miller, Daniel M.  
326 Doctors Bldg. (31)

Miller, Fletcher A.  
St. Joseph's Hosp. (08)

Minard, David W.  
3610 Dodge St. (31)

Minthorn, Murray F.  
5620 Ames (04)

Mitchell, John R.  
4815 Dodge St. (32)

Mnuk, Frank J.  
3374 So. 13th (08)

Moody, W. B. (Life)  
1017 No. 63rd St. (32)

Moon, C. F. (Life)  
410 So. Saddle Cr. Rd. (06)

Moore, Ralph C.  
2017 So. 107th St. (07)

Mooring, Paul K.  
301 Doctors Bldg. (31)

Moragues, Vincent  
Creighton Univ. (31)

Moran, C. S.  
Archbishop Bergan Mercy  
Hosp. (06)

Morris, Haskell  
530 Med. Arts Bldg. (02)

Morrison, Wm. Howard  
710 Doctors Bldg. (31)

Morrow, Paul N.  
3610 Dodge St. (31)

Monntford, Stanley  
Millard, Nebr. (68043)

Muehlig, G. Kenneth  
636 Med. Arts Bldg. (02)

Muehlig, W. A.  
636 Med. Arts Bldg. (02)

Muffy, Robert Benton  
Nebr. Psychiatric Inst. (05)

Mulcahy, Gabriel  
2206 So. 84th St. (24)

Murphy, Albert V.  
826 Med. Arts Bldg. (02)

Murphy, Charles M.  
5901 Military Ave. (04)

Murphy, J. Harry  
8601 W. Dodge Rd. (14)

Murphy, Jerome P.  
320 No. 20th St. (02)

Murphy, Robert E.  
204 So. 42nd St. (31)

Murray, Robert G.  
Benson Medical Center (04)

Muskin, Nathan  
2602 J. St. (07)

Musselman, Merle M.  
Univ. of Nebr. Col.  
of Med. (05)

Nachman, E. A.  
Council Bluffs, Ia.

Neis, Delbert D.  
525 Doctors Bldg. (31)

Neligh, Rosalie B.  
Council Bluffs, Ia.

Nelson, Floyd C.  
2734 No. 61st St. (04)

Nemec, C. J. (Life)  
1908 So. 15th St. (08)

Neu, Harold N.  
207 So. 42nd St. (31)

Neihans, Friedrich W. (Life)  
824 Doctors Bldg. (31)

Niehaus, Karl  
824 Doctors Bldg. (31)

Nilsson, Donald C.  
4209 Douglas (31)

Nolan, James R.  
9015 Arbor (24)

Novak, W. F.  
307 Med. Arts Bldg. (02)

Oberst, Byron B.  
3925 Dewey (05)

Offerman, A. J.  
4805½ So. 24th St. (07)

Olnhausen, Ronald W.  
3610 Dodge St. (31)

O'Hearn, J. J. (Life)  
4811 So. 24th St. (07)

Olson, Leland J.  
201 Doctors Bldg. (31)

O'Neil, Gerald C.  
3610 Dodge St. (31)

O'Neil, James J.  
612 Med. Arts Bldg. (02)

Organ, Claude H.  
914 Med. Arts Bldg. (02)

Osborn, Leslie A.  
Nebr. Psychiatric Inst. (05)

Owens, C. A., Jr. (Life)  
Tucson, Ariz.

Pantano, Anthony R.  
714 W.O.W. Bldg. (02)

Parkison, Donald  
Millard Shopping Center,  
Millard, Nebr. (68043)

Paustian, Frederick F.  
301 Doctors Bldg. (31)

Pearse, Warren H.  
Univ. Hosp. (05)

Peartree, Sherwood P.  
415 Med. Arts Bldg. (02)

Pederson, E. Stanley  
622 Doctors Bldg. (31)

Pemberton, John W.  
8601 W. Dodge Rd. (14)

Pepper, M. L.  
8601 W. Dodge Rd. (14)

Perrin, Theodore  
St. Joseph's Hosp. (08)

Perry, S. H.  
Childrens Memorial  
Hosp. (05)  
(Dawson Co.)

Peters, Richard  
9015 Arbor (24)

Peterson, Margaret H.  
Nebr. Psychiatric Inst. (05)

Peterson, Ronald I.  
6025 Ogden (04)

Pinne, George F.  
421 Doctors Bldg. (31)

Pirotte, Richard A.  
9015 Arbor (24)

Placek, Louis T.  
211 Med. Arts Bldg. (02)

Pleiss, Joseph A.  
716 Med. Arts Bldg. (02)

Poepsel, Howard F.  
1012 Med. Arts Bldg. (02)

Potter, Stanley E.  
609 Doctors Bldg. (31)



Potthoff, Carl J.  
Univ. of Nebr. Col.  
of Med. (05)  
Pratt, Peyton T.  
600 Doctors Bldg. (31)  
Prescher, Donald A.  
5404 Ames (04)  
Pruner, A. C. (Life)  
717 Med. Arts Bldg. (02)  
Pullman, George R.  
Lutheran Hosp. (31)  
Quinlan, Maurice F.  
6016 Ames (04)  
Quiring, Henry J.  
2734 No. 61st St. (04)  
Rance, W. T.  
730 City Natl. Bank  
Bldg. (02)  
Rasgorshek, R. H.  
425 Aquila Court (02)  
Rasmussen, John A.  
609 Doctors Bldg. (31)  
Rath, Hans  
320 Doctors Bldg. (31)  
Rath, Otto G.  
3929 Harney (31)  
Read, Paul S.  
6025 Ogden (04)  
Redgwick, J. P.  
410 So. Saddle Cr. Rd. (06)  
Reedy, Wm. J.  
207 So. 42nd St. (31)  
Rees, Barney B.  
419 Doctors Bldg. (31)  
Reichstadt, Paul F.  
3001 No. 16th St. (10)  
Reighter, Kenneth M.  
3665 Q St. (07)  
Retelsdorf, C. Lee  
3610 Dodge St. (31)  
Ries, Gerald  
3568 Dodge St. (31)  
Ring, Floyd O.  
Union, Nebr. (68455)  
Robertson, G. E.  
308 So. 39th St. (31)  
Roffman, Larry  
834 Doctors Bldg. (31)  
Root, Charles M.  
3610 Dodge St. (31)  
Roth, Wm. F.  
Nebr. Psychiatric Inst. (05)  
Rouse, James W.  
1012 Med. Arts Bldg. (02)  
Rubnitz, A. S.  
732 Med. Arts Bldg. (02)  
Rumbolz, Wm. L.  
410 So. Saddle Cr. Rd. (06)  
Runco, Vincent  
St. Joseph's Hosp. (08)  
Russell, Harry  
Univ. Hosp. (05)  
(Hall Co.)  
Ryder, James E.  
1901 Missouri Ave. (07)  
Sage, John C.  
8721 Shamrock Rd. (14)  
Sasse, Carl W., Jr.  
8601 W. Dodge Rd. (14)  
Schack, Colin B.  
410 So. Saddle Cr. Rd. (06)  
Schain, Richard J.  
Nebr. Psychiatric Inst. (05)

Schenken, John R.  
Methodist Hosp. (31)  
Schlietmeyer, J. P.  
1131 So. 99th St. (24)  
Schmitz, W. H., Sr.  
611 City Natl. Bank  
Bldg. (02)  
Schmitz, Wm., Jr.  
611 City Natl. Bank  
Bldg. (02)  
Schreiner, Gilbert C.  
3929 Harney (31)  
Schultz, Lloyd  
325 Doctors Bldg. (31)  
Schwertley, F. J. (Life)  
614 Barker Bldg. (02)  
Scott, Joseph C.  
Univ. of Nebr. (05)  
Scott, Nathaniel C.  
5914 No. 42nd St. (04)  
Scott-Miller, James L.  
3929 Harney (31)  
Shapiro, Irving  
2010 No. 66th St. (04)  
Shearer, W. L. (Life)  
St. Paul, Minn.  
Shramek, C. J.  
511 Redick Tower (02)  
Simanek, George F. (Life)  
Colorado Springs, Colo.  
Simmons, Cecil F.  
4901 Mayberry (06)  
(Burt Co.)  
Simmons, E. E. (Life)  
8322 No. 37th St. (12)  
Simonds, Francis L. (Life)  
615 So. 38th St. (05)  
Simons, Milton  
701 Doctors Bldg. (31)  
Simpson, J. E. (Life)  
(Deceased 12-16-64)  
Sinnott, John J.  
4601 So. 50th St. (17)  
Sjogren, Merle  
105 So. 49th St. (32)  
Skooog, Donald P.  
618 Doctors Bldg. (31)  
Skooog-Smith, Anton  
839 So. 93rd St. (14)  
Slabaugh, Robert A.  
8601 W. Dodge Rd. (14)  
Slavik, Edward R.  
8422 W. Center Rd. (24)  
Slunicko, Jules A.  
5607 So. 77th St.  
Ralston, Nebr. (68051)  
Slutzky, Ben  
5009 Nicholas St. (32)  
Smith, Clifford L.  
506 Center Bldg. (05)  
Smith, Dorothy I.  
Univ. of Nebr. Hosp. (05)  
Smith, Edward J.  
403 Center Bldg. (05)  
Smith, Fay  
801 So. 52nd St.  
No. 2013 (06)  
(Southwest Nebr.)  
Smith, Francis D.  
Univ. of Nebr. Col.  
of Med. (05)  
Smith, John W.  
3610 Dodge St. (31)

Smith, Richard Dale  
111 Doctors Bldg. (31)  
Smith, Thomas T.  
8601 W. Dodge Rd. (14)  
Sobota, Jos. E.  
3019 Ames Ave. (11)  
Solomon, W. W.  
3024 No. 24th St. (10)  
Soule, Mary A.  
442 Doctors Bldg. (31)  
Srb, Adolph F.  
1719 So. 16th St. (08)  
St. Aubin Paul M.  
8128 Farnam Dr. (14)  
Starr, Philip H.  
509 Doctors Bldg. (31)  
Stearns, R. J. (Life)  
2301 Ellison (10)  
Steinberg, M. M.  
307 Med. Arts Bldg. (02)  
Stoner, Maurice E.  
628 Med. Arts Bldg. (02)  
Strough, L. C.  
Nebr. Psychiatric Inst. (05)  
Stryker, Robert M.  
8258 Hascall St. (24)  
Sucha, W. L. (Life)  
4017 Page St. (31)  
Sullivan, H. T.  
(Deceased 6-16-65)  
Sullivan, James F.  
5212 Webster St. (32)  
Sundell, Ray  
8601 W. Dodge Rd. (14)  
Svehla, Richard B.  
1418 Med. Arts Bldg. (02)  
Swab, C. M. (Life)  
1316 Med. Arts Bldg. (02)  
Swab, Elizabeth M. (Life)  
1316 Med. Arts Bldg. (02)  
Swenson, Samuel A., Jr.  
110 Doctors Bldg. (31)  
Tamsiea, Jerry X.  
Methodist Hosp. (31)  
Tanner, John W.  
8712 Pacific (14)  
Taylor, R. J.  
4601 So. 50th St. (17)  
Taylor, Willis H., Jr.  
3807 Cumming St. (31)  
Therien, R. C.  
701 Doctors Bldg. (31)  
Thomas, John Martin  
3929 Harney (31)  
Thompson, Dorothy H.  
Methodist Hosp. (31)  
Thompson, Lynn W.  
526 Doctors Bldg. (31)  
Tollman, J. P.  
Univ. of Nebr. Col.  
of Med. (05)  
Tranisi, Carl P.  
9015 Arbor (24)  
Troia, Carl  
1227 Med. Arts Bldg. (02)  
Truhlsen, Stanley M.  
710 Doctors Bldg. (31)  
Tunakan, Bulent  
Nebr. Psychiatric Inst. (05)  
Turner, Robert  
8420 W. Center Rd. (24)  
Underriner, Robert E.  
5827 No. 60th St. (04)

VaVerka, James W.  
219 Med. Arts Bldg. (02)  
Vetter, J. G.  
721 W.O.W. Bldg. (02)  
Vickery, Robert D.  
818 Doctors Bldg. (31)  
Waggener, Ronald E.  
Methodist Hosp. (31)  
Wagner, Daniel  
540 Center Bldg. (05)  
Waldbaum, Milton G.  
1512 So. 60th St. (06)  
Walling, Gail E.  
701 Doctors Bldg. (31)  
Walsh, E. M.  
5002 Dodge St. (32)  
Walvoord, Carl A.  
4052 Grand Ave. (11)  
Ware, Frederick  
720 Doctors Bldg. (31)  
Waters, C. H. (Life)  
843 Fairacres Rd. (32)  
Waters, Chester H., Jr.  
209 So. 42nd St. (31)  
Watke, F. M. (Life)  
4624 Davenport (32)  
Watland, Dean C.  
8601 W. Dodge Rd. (14)  
Wax, James I.  
118 So. 88th St. (14)  
Weeks, David S.  
8258 Hascall St. (24)  
Weingarten, Wm. H.  
111 Doctors Bldg. (31)  
Wigton, Robert S.  
105 So. 49th St. (32)  
Wilhelmj, C. M., Jr.  
634 Doctors Bldg. (31)  
Wilkie, Louis J.  
816 Med. Arts Bldg. (02)  
Williams, A. Ruth  
612 Omaha Loan Bldg. (02)  
Williams, Perry T.  
9015 Arbor St. (24)  
Williams, Russell R., Jr.  
1412 Med. Arts Bldg. (02)  
Wilson, Carlyle E., Jr.  
3610 Dodge St. (31)  
Wilson, Donald J.  
1113 Med. Arts Bldg. (02)  
Wilson, Richard B.  
Univ. Hosp. (05)  
Wittson, Cecil L.  
Univ. of Nebr. Col.  
of Med. (05)  
Wright, W. D.  
302 Doctors Bldg. (31)  
Wurl, Otto A.  
3610 Dodge St. (31)  
Wyrens, Raymond J.  
8601 W. Dodge Rd. (14)  
Young, George A., Jr.  
1317 Ridgewood Ave. (24)  
Zahler, F. Marshall, Jr.  
60th and Ogden (04)  
Zarbano, Sebastian  
512 Center Bldg. (05)  
Zastera, Jack R.  
816 Med. Arts Bldg. (02)  
Zoucha, Adam E.  
4320 So. 24th St. (07)  
Zukaitis, R. R.  
7631 Main St.  
Ralston, Nebr. (68051)

## SECOND DISTRICT

JOHN T. McGREER, JR., Councilor

### LANCASTER

#### LINCOLN—

(685 + Two Digits Follow-  
ing Address = Zip Code  
for Lincoln)  
Ahrens, H. G.  
339 No. Cotner (05)  
Alcorn, F. A.  
2201 So. 11th St. (02)  
Allen, Dale R.  
3560 So. 48th St. (06)  
Angle, E. E.  
3705 South St. (06)  
Arnholt, M. F. (Life)  
3421 "O" St. (10)  
Arnold, C. H. (Life)  
2480 Lake St. (02)  
Baldwin, John D.  
930 Stuart Bldg. (08)  
Ballew, J. W.  
1701 "K" St. (08)  
Bancroft, Paul M.  
1010 So. 34th St. (10)  
Barkey, V. S.  
6330 Platte Ave. (07)

Barthell, John H.  
1012 Sharp Bldg. (08)  
Becker, W. C. (Life)  
1501 So. 52nd St. (06)  
Bell, C. D.  
413 Sharp Bldg. (08)  
Bengtson, John W.  
3145 "O" St. (10)  
Zeitner, Mary S.  
State Capitol (09)  
(Platte Co.)  
Black, Paul (Life)  
147 No. 9th St. (01)  
Blum, Henry  
Rm. 2, Nebr. Theatre  
Bldg. (08)  
Boykin, J. Melvin  
Veterans Hosp. (01)  
Bradley, Warren Q.  
924 Sharp Bldg. (08)  
Brauer, Russell C.  
4150 South St. (06)  
Brill, I. William  
Student Health Center,  
Univ. of Nebr. (08)  
Broisma, M. P.  
435 So. 16th St. (08)

Brooks, E. B.  
2323 So. 22nd St. (02)  
Brooks, Robert A.  
1403 Sharp Bldg. (08)  
Brown, John A. III  
1620 "M" St. (08)  
Cain, Jerome A.  
1550 So. 17th St. (10)  
Calvert, Thomas D.  
800 So. 13th St. (08)  
Campbell, W. A.  
1321 Sharp Bldg. (08)  
Carveth, Stephen W.  
1013 Sharp Bldg. (08)  
Carveth, W. W.  
626 Sharp Bldg. (08)  
Cherry, L. D.  
921 Stuart Bldg. (08)  
Clothier, John G.  
Veterans Hosp. (01)  
Clyne, John C.  
339 No. Cotner (05)  
Cole, Frank  
2430 Lake St. (02)  
Coleman, F. D.  
3050 Stratford St. (02)

Covey, George W.  
2900 Jackson Dr. (02)  
Crawford, Mark E.  
939 Stuart Bldg. (08)  
Cuka, Dennis J.  
1735 So. 20th St. (02)  
Curry, John R.  
1053 Stuart Bldg. (08)  
Davies, L. T.  
816 Sharp Bldg. (08)  
Dean, G. W.  
817 So. 27th St. (10)  
Deppen, E. N.  
1500 "P" St. (08)  
Deubler, Keith (Service)  
Ft. Riley, Kansas  
Ebers, Dale W.  
800 So. 13th St. (08)  
Ehrlich, Robert W.  
816 Sharp Bldg. (08)  
Emerson, Clarence (Life)  
1909 So. 33rd St. (06)  
Epp, M. J.  
1108 Sharp Bldg. (08)  
Fenton, Bryan C. T.  
Chicago, Ill.



Ferciot, C. F.  
1000 So. 13th St. (08)  
Fijan, Kenneth J.  
3145 "O" St. (10)  
Finney, L. E.  
323 So. 14th St. (08)  
Flansburg, H. E.  
1103 Sharp Bldg. (08)  
Frazer, M. D.  
Bryan Memorial Hosp. (06)  
Fritsch, John H.  
3145 "O" St. (10)  
Fuenning, S. I.  
5100 Grandview Lane  
Garlinghouse, R. E.  
140 So. 27th St. (10)  
Garlinghouse, R. O.  
921 Stuart Bldg. (08)  
Gartner, Lee D.  
903 Sharp Bldg. (08)  
Getscher, Phillin E.  
306 Sharp Bldg. (08)  
Gibson, L. V.  
1923 Pawnee (02)  
Gilbert, Louis W.  
903 Sharp Bldg. (08)  
Gillespie, Robert W.  
500 So. 17th St. (08)  
Gietowski, Paul  
1000 So. 13th St. (08)  
Gogola, Louis J.  
1318 Sharp Bldg. (08)  
Gorthey, Russell L.  
3440 "O" St. (10)  
Graham, Hamlin  
1000 So. 13th St. (08)  
Grant, Robert S.  
48th and "A" Sts. (10)  
Grav, Richard W.  
2501 Rathbone Rd. (02)  
Griffin, Wm. T.  
1405 Sharp Bldg. (08)  
Gross, Chas. G.  
Veterans Hosp. (01)  
(Southwest Nebr.)  
Gutch, Charles F.  
Veterans Hosp. (01)  
(Gage Co.)  
Hachiva, Keay  
3910 Stockwell (06)  
Hanigan, J. J.  
1700 So. 24th St. (02)  
Hansen, Hodson A.  
140 So. 27th St. (10)  
Harvey, Harold E.  
140 So. 27th St. (10)  
Harvey, Harry E. (Life)  
1130 "H" St. (08)  
Hastv, Robert C.  
Veterans Hosp. (01)  
Hathaway, F. H.  
1001 "O" St. (08)  
Heidrick, Paul J.  
739 Stuart Bldg. (08)  
Hervert, J. Wm.  
3145 "O" St. (10)  
Hillyer, R. A.  
135 So. 14th St. (08)  
Hilton, Hiram D.  
1405 Sharp Bldg. (08)  
Hobbs, E. T.  
6500 Holdrege St. (05)  
Hohlen, K. S. J.  
2961 Sheridan Blvd. (02)  
Horn, Harold R.  
3145 "O" St. (10)  
Hummel, R. O. (Life)  
2435 Bradford Dr. (02)  
Jarvis, W. J.  
3145 "O" St. (10)  
Johnson, L. Palmer  
3440 "O" St. (10)  
Jones, Robert K.  
4740 "A" St. (10)  
Larson, George E.  
1301 Sharp Bldg. (08)  
Lau, Glen F.  
735 So. 56th St. (10)

Lee, Leonard R.  
307 So. 16th St. (08)  
Lewis, George E., Jr.  
723 Sharp Bldg. (08)  
Lewis, L. G. H.  
2990 So. 46th St. (06)  
LeWorthy, G. Wm.  
3145 "O" St. (10)  
Lodge, James L.  
3145 "O" St. (10)  
Loudon, John R.  
1110 Sharp Bldg. (08)  
Loveland, Grace  
909 Sharp Bldg. (08)  
Maness, E. Stewart  
1006 Sharp Bldg. (08)  
Marx, L. E.  
901 Fed. Sec. Bldg. (08)  
Marx, Paul D.  
901 Fed. Sec. Bldg. (08)  
Mathews, M. Jack  
307 So. 16th St. (08)  
Matson, Guy M.  
2737 No. 49th St. (04)  
Matthews, Donald E.  
140 So. 27th St. (10)  
Maxwell, Paul J.  
1701 So. 17th St. (02)  
McCarthy, T. F. (Life)  
No. 5 Nebr. Theatre  
Bldg. (08)  
McGinnis, Kenneth T.  
3145 "O" St. (10)  
McGreer, John T., Jr.  
924 Sharp Bldg. (08)  
Miller, Harold B.  
1403 Sharp Bldg. (08)  
Miller, N. R.  
735 Stuart Bldg. (08)  
Miller, S. D.  
5532 South St. (06)  
Misko, G. H.  
706 1st Natl. Bank  
Bldg. (08)  
Mitchell, Howard E.  
2300 So. 13th St. (02)  
Moessner, S. F.  
1025 Sharp Bldg. (08)  
Moore, Robt.  
1010 Sharp Bldg. (08)  
Moore, Y. Scott  
135 So. 14th St. (08)  
Morgan, Harold S.  
3440 "O" St. (10)  
Morton, H. B.  
4401 Sumner (06)  
Mueller, R. F.  
1325 Sharp Bldg. (08)  
Munger, A. D. (Life)  
Bullhead City, Ariz.  
Munser, Horace V.  
3705 South St. (06)  
Nebe, F. M.  
943 Stuart Bldg. (08)  
Neely, J. Marshall  
Bryan Memorial Hosp. (06)  
Neely, Orvis A.  
924 Sharp Bldg. (08)  
Neumayer, Francis  
48th and "A" Sts. (10)  
Newell, Charles H.  
4848 Sumner St. (06)  
Norman, Chester L.  
3560 So. 48th St. (10)  
Nye, William F.  
950 Stuart Bldg. (08)  
Olney, R. C.  
4600 Valley Rd. (10)  
Palmer, Janet Forbes  
343 Stuart Bldg. (08)  
Papenfuss, Harlan L.  
1403 Sharp Bldg. (08)  
Paulson, H. O.  
508 Sharp Bldg. (08)  
Peterson, Paul L.  
707 Sharp Bldg. (08)  
Place, George E.  
4825 St. Paul Ave. (04)  
Podlesak, J. I.  
612-614 Terminal Bldg. (08)  
Porze, Raymond C.  
Dorsey Labs (01)  
Porterfield, John F.  
1145 South St. (02)  
Purvis, Donald F.  
1701 So. 17th St. (02)  
Reed, E. B.  
3145 "O" St. (10)  
Reese, S. O.  
816 Sharp Bldg. (08)  
Reeve, Chas. L.  
6330 Platte Ave. (07)  
Richman, James H.  
626 Sharp Bldg. (08)  
Rider, Larry (Life)  
835 Eldon Dr. (10)  
Rogers, E. A.  
State Dept. Health  
State Capitol (09)  
Rose, Forrest I.  
916 Sharp Bldg. (08)  
Rose, Kenneth D.  
Univ. of Nebr. Student  
Health Center (08)  
Rustad, Elliott L.  
810 Sharp Bldg. (08)  
Sanderson, D. D.  
914 Stuart Bldg. (08)  
Schnert, Keith W.  
Dorsey Labs (01)  
Shaffer, Harry D.  
724 Sharp Bldg. (08)  
Sharrar, Lynn E.  
719 Sharp Bldg. (08)  
Simon, Nathan  
1701 "K" St. (08)  
Skworcow, George  
Veterans Hosp. (01)  
Smith, A. L., Jr.  
510 Anderson Bldg. (08)  
Smith, A. L., Sr.  
510 Anderson Bldg. (08)  
Stafford, G. E.  
800 So. 13th St. (08)  
Statton, Roy F.  
702 Sharp Bldg. (08)  
Stein, Robert J.  
930 Stuart Bldg. (08)  
Stemper, Jack M.  
4740 "A" St. (10)  
Stewart, Frank A.  
2133 Winthrop Rd. (02)  
Stivins, Kazimirs  
3145 "O" St. (10)  
Stivins, Patricia Cole  
3145 "O" St. (10)  
Stone, Frank P.  
2300 So. 13th St. (02)  
Stover, Lee  
1701 So. 17th St. (02)  
Strader, R. M.  
2526 "A" St. (02)  
Synhorst, Robert B.  
903 Sharp Bldg. (08)  
Taborsky, A. F.  
629 Stuart Bldg. (08)  
Tanner, Frank H.  
1835 So. Pershing Rd. (02)  
Taylor, Powen E.  
3145 "O" St. (10)  
Taylor, H. A. (Life)  
4728 St. Paul Ave. (04)  
Teal, F. F. (Life)  
2815 So. 37th St. (06)  
Teal, Fritz  
2300 So. 13th St. (02)  
Tenney, Lloyd E.  
1025 Sharp Bldg. (08)  
Thierstein, Samuel T.  
6211 "O" St. (10)  
Thomas, R. L.  
48th and "A" Sts. (10)  
Thompson, J. C.  
307 So. 16th St. (08)  
Thompson, John R.  
Student Health Center,  
Univ. of Nebr. (08)

Thorough, Paul H.  
950 So. Cotner (10)  
Tomhave, Wesley G.  
307 So. 16th St. (08)  
Toren, Richard C.  
135 So. 14th St. (08)  
Troester, Otto S.  
924 Sharp Bldg. (08)  
Underwood, G. R.  
5826 "J" St. (10)  
Wallace, Hobart E.  
5145 "O" St. (10)  
Warner, Ruth A.  
909 Stuart Bldg. (08)  
Weaver, Walt  
512 1st Natl. Bank  
Bldg. (08)  
Webb, A. H.  
1130 "H" St. (08)  
Webman, A. I.  
3210 So. 28th St. (02)  
Webster, F. S.  
1000 So. 13th St. (08)  
Wegner, E. S.  
724 Sharp Bldg. (08)  
Welch, J. S. (Life)  
(Deceased 3-65)  
Wendt, Bernard F.  
735 So. 56th St. (10)  
Weston, Irving E.  
735 So. 56th St. (10)  
Weyhrauch, Wm. R.  
3145 "O" St. (10)  
Whitla, Fay E.  
3620 "L" St. (10)  
Whitlock, H. H.  
805 Sharp Bldg. (08)  
Wiedman, J. G.  
339 No. Cotner (05)  
Wiedman, Wilbur G.  
135 So. 14th St. (08)  
Williams, Jon T.  
435 So. 16th St. (08)  
Wilson, Nat J.  
Veterans Hosp. (01)  
Wood, Mavnard A.  
3145 "O" St. (10)  
Woodward, J. M. (Life)  
910 Sharp Bldg. (08)  
Zeman, E. D.  
1145 South St. (02)

## CASS

ELMWOOD (68349)  
Knosp, Glen D.  
LOUISVILLE (68037)  
Worthman, H. W.

MURRAY (68409)  
Tyson, R. W.

NEHAWKA (68413)  
Andersen, R. R.  
PLATTSMOUTH (68048)  
Brendel, R. F.  
Dirtz, Robert J.

WEEPING WATER (68463)  
Kunkel, L. N.

## OTOE

NEBRASKA CITY (68410)  
Bonebrake, A. H.  
Burbridge, Glen E.  
Fenstermacher, R. C.  
Gilligan, J. P.  
Kenner, W. C.  
Stoneypher, D. D., Sr.  
Weekes, T. L.  
Weldon, R. C.  
SYRACUSE (68446)  
Formanack, C. J.  
Gately, H. S.  
Williams, C. R.

## THIRD DISTRICT

### W. W. WADDEL, Councillor

#### GAGE

ADAMS (68301)  
Waggener, J. T. (Life)  
BEATRICE (68310)  
Brott, Clarence R.  
109 So. 6th  
Brown, R.  
109 So. 6th

Chapp, John  
821 No. 13th  
Elias, H. F.  
1200 So. 9th  
Frerichs, C. T.  
114 So. 6th  
Gillespie, Patrick C.  
1110 No. 10th  
Hepperlen, H. M., Jr.  
206 Steinmeyer Bldg.

McCleery, D. P.  
108 So. 6th  
Moell, L. Dwight  
109 So. 6th  
Penner, Donald H.  
205 No. 19th  
Penner, Elmer L.  
205 No. 19th  
Porter, John W.  
1200 So. 9th

Rathbun, Sanford M.  
114 So. 6th  
Taylor, R. W.  
108 So. 6th  
Waddell, J. C. (Life)  
114 So. 6th  
Waddell, W. W.  
114 So. 6th  
Wildhaber, Wm. T.  
710 East Court St.

WYMORE (68466)  
Nelson, J. C.  
Samuelson, Myron Earle  
Thomas, C. W. (Life)

### NEMAHA

AUBURN (68305)  
Bence, Jackson  
Fairbanks, Wendell

Irvin, I. W. (Life)  
Krickbaum, John H.  
Scott, Paul M.

### PAWNEE

PAWNEE CITY (68420)  
Anderson, A. B., Jr.  
Stewart, H. C.

### RICHARDSON

FALLS CITY (68355)  
Brennan, Louis V.  
Burghart, Robert L.  
Cowan, S. D. (Life)  
Farmer, Wm.  
Gentry, Richard D.  
Gillespie, J. C. (Life)  
Glenn, W. V.  
Heins, Robert L.

HUMBOLDT (68376)  
Heim, H. S.  
Stappenbeck, A. P.

### JOHNSON

TECUMSEH (68450)  
Schutz, John C.  
Sorrell, Michael

## FOURTH DISTRICT

J. T. KEOWN, Councilor

### MADISON

MADISON (68748)  
Berrick, Wm. H.  
Ewing, Eugene G.  
NEWMAN GROVE (68758)  
Carlson, Emery W.  
NORFOLK (68701)  
Adams, Gordon D.  
900 Norfolk Ave.  
Brauer, S. H.  
Rt. 2  
Charlton, George E. (Life)  
Colorado Springs, Colo.  
Conwell, G. D.  
509 Norfolk Ave.  
Dahlheim, Harold  
100 No. 13th  
David, Joseph  
1109 Norfolk Ave.  
Dunlap, James  
1112 Verges  
Farner, B. R.  
900 Norfolk Ave.  
Hansen, Warren  
Norfolk State Hosp.  
Ingham, Chas. G.  
Box 902, Norfolk St. Hosp.  
Klaas, R. E.  
13th & Nebraska  
Lear, W. J.  
900 Norfolk Ave.  
Martin, Francis  
1103 Madison  
Osborne, Robert G.  
Box 902  
Pollack, John D.  
Rt. 3, 312 Valley View Dr.

Salter, George B.  
900 Norfolk Ave.  
Schwedhelm, A. J.  
13th & Nebraska  
Stehl, C. H. L.  
Box 902  
Stewart, George J.  
Box 408, 719 Norfolk Ave.  
Surber, E. G.  
Box 225  
Verges, C. J. (Life)  
Box 117  
Verges, Val C.  
Box 279, 105 So. 8th  
Wullschlegler, Otto  
13th & Nebraska  
TILDEN (68781)  
Barr, Carl C.  
Barr, Robert E.

### CUMING

WEST POINT (68788)  
Chadek, L. J.  
Cox, Roger  
Ericson, L. L.  
Scherer, Robert H.  
Sucha, Eugene  
Worthman, John

### PIERCE

OSMOND (68765)  
Mailliard, A. E.  
PIERCE (68767)  
Calvert, John H.  
Devers, W. I.  
PLAINVIEW (68769)  
Kopp, Robert E.

### KNOX

BLOOMFIELD (68718)  
Kohtz, R. H.  
Nagengast, Delwyn J.  
CREIGHTON (68729)  
Green, Carl R.  
Wright, W. E.  
NIOBRARA (68760)  
Neil, Stanley Roy  
WAUSA (68786)  
Tollefson, Richard L.  
VERDIGRE (68783)  
Carlson, James C.

### STANTON

STANTON (68779)  
Tennant, H. S.

### ANTELOPE

ELGIN (68636)  
Graham, W. W.  
NELIGH (68756)  
Curtis, E. E. (Life)  
McClanahan, Frank C., Jr.  
Pcetz, Dwaine J.

### CEDAR

(Five County)  
COLERIDGE (68727)  
Dewey, F. G. (Life)  
HARTINGTON (68739)  
Vlach, C. J.

LAUREL (68745)  
Carroll, R. P.  
RANDOLPH (68771)  
Rillerbeck, Henry J.  
Peters, G. E.

### DIXON

(Five County)

PONCA (68770)  
Bray, R. E.  
WAKEFIELD (68784)  
Coe, C. M.

### THURSTON

(Five County)

PENDER (68047)  
Keown, J. T., Jr.  
Martin, Ben O.  
Muffly, Chas. G.

### DAKOTA

(Five County)

SOUTH SIOUX CITY (68776)  
Reynolds, Wm. E.

### WAYNE

(Five County)

WAYNE (68787)  
Benthack, Robert B.  
Benthack, Walter  
John, George L.  
Matson, Roy M.

## FIFTH DISTRICT

H. D. KUPER, Councilor

### DODGE

DODGE (68633)  
Srb, G. J.  
FREMONT (68025)  
Bridges, James  
1835 E. Military  
Chleborad, Wm. J.  
1501 N. Hancock  
Davies, Dale H.  
450 E. 23rd  
Eaton, William Bryon  
204 I.O.O.F. Bldg.  
Harvey, Alexander T.  
2195 N. Broad  
Harvey, Andrew (Life)  
631 N. Main  
Haslam, G. A.  
625 N. Main  
Hill, W. H.  
1737 E. Military  
Jakeman, Harry A.  
2195 N. Broad  
Merrick, A. J.  
1005 E. 23rd  
Millett, Geo. J.  
2195 N. Broad  
Morrow, H. H.  
423 W. 11th  
Nelson, Carrol C.  
2195 N. Broad  
Reeder, Grant (Life)  
212 First Natl. Bank  
Reeder, Robert C.  
212 First Natl. Bank  
Seiver, Charlotte (Life)  
507 E. 6th  
Smith, Harold G., Jr.  
1835 E. Military

Sorensen, Robert M.  
1135 N. Oak  
Waring, F. Thomas  
203 IOOF Bldg.  
Wengert, D. B.  
640 N. "H" St.  
Yost, Howard  
215 E. 22nd  
HOOPER (68031)  
Heusel, Wm. G.  
SCRIBNER (68057)  
Nelson, O. D.

### WASHINGTON

ARLINGTON (68002)  
Block, D. M.  
(Dodge Co.)  
Block, Dean M.  
(Dodge Co.)  
BLAIR (68008)  
Bagby, Kenneth C.  
Goehring, W. E.  
Grace, Leslie I.  
Howard, C. D.  
Sievers, Rudolph

### COLFAX

CLARKSON (68629)  
O'Neal, John R.  
SCHUYLER (68661)  
Fencl, Howard S.  
Myers, H. Dey, Jr.  
Sucha, Merlin L.

### BOONE

ALBION (68620)  
Smith, Roy J.  
Spethman, Gerald  
CEDAR RAPIDS (68627)  
Reeder, W. J.  
ST. EDWARD (68660)  
Reardon, Wm.

### BURT

LYONS (68038)  
Radin, Robert V.  
OAKLAND (68045)  
Mullmann, Arnold J.  
T'bbe's, R. H.

TEKAMAH (68061)  
Lukens, I.  
Morrow, L.  
Sauer, L. E.

### PLATTE

COLUMBUS (68601)  
Anderson, R. C.  
1359 26th Ave.  
Brillhart, E. G.  
13th St. and 31st Ave.  
Burns, Robert I.  
135 E. Parkway  
Deyke, Vern F.  
13th St. and 31st Ave.

Fischer, Rex R.  
Columbus Clinic  
Heine, Clinton D.  
13th St. & 31st Ave.  
Heiser, E. N.  
13th St. and 31st Ave.  
Kuper, H. D.  
2511 15th  
Lemke, Theo. J., Jr.  
1454 28th Ave.  
Medlar, Clyde A.  
1454 28th Ave.  
Miller, W. R.  
1454 28th Ave.  
Rundquist, R. B.  
2360 Pershing Road  
Sojka, Louis A.  
2413 23rd

### NANCE

FULLERTON (68638)  
Maly, James C.  
GENOA (68640)  
Bass, R. L.  
Dalton, Kenneth R.  
Davis, Homer (Life)

### MERRICK

CENTRAL CITY (68826)  
Campbell, John  
Holmes, Lee C.  
Treptow, Kenneth R.  
Zikmund, E. T.  
CLARKS (68628)  
Douglas, R. R.

**SIXTH DISTRICT**  
**C. L. ANDERSON, Councilor**

**BUTLER**

**DAVID CITY** (68632)  
Ekeler, Louis J.  
Kaufman, Jack  
Niehaus, Wm. C.  
Rudolph, Larry

**SEWARD**

**MILFORD** (68405)  
Frans, James R.

**SEWARD** (68434)  
Carr, J. W.  
Herpolsheimer, R. W.  
Hill, W. Ray  
Hoff, R. Paul  
Morrow, B. E. (Life)  
Pitsch, Richard M.  
Standard, John T. (Life)  
(Deceased 6-7-65)  
Watson, V. Robert

**UTICA** (68456)  
Meyer, Roger

**SAUNDERS**

**ASHLAND** (68003)  
Laumond, James P.  
Williams, Martin P.

**CERESCO—**  
Youngman, R. A.  
Cedar Rapids, Ia.

**YUTAN** (68073)  
Norton, Robert

**WAHOO** (68066)  
French, Ivan M.  
Hansen, John E.  
Hinrichs, E. J.  
Pestal, Joe (Life)  
Rawlins, Wyo.  
Wallace, Stephen E.  
Way, Charles

**YORK**

**YORK** (68467)  
Anderson, Leo  
Westfield, N.J.  
Bell, James D.  
Bell, J. S.  
Brown, A. R.  
Memphis, Tenn.  
Greenberg, B. N.  
Harry, R. E.  
Karrer, F. W. (Life)  
Karrer, Robert E.  
Kilgore, W. S.  
Loschen, Darroll J.  
(Five Co.)  
Nordlund, Harold M.

**HENDERSON** (68371)  
Friesen, H. F.  
Hieb, Wilbert E.

**HAMILTON**

**AURORA** (68818)  
Larson, Donald J.  
Madden, Patrick J.  
Murphy, John E.  
Steenburg, E. A.  
Steenburg, E. K.  
Washington, D.C.  
Steenburg, Houtz G.  
Woodard, J. M.  
**HAMPTON** (68843)  
Troester, O. M. (Life)

**POLK**

**OSCEOLA** (68651)  
Eklund, H. S.  
Hadley, Clifford M.  
**STROMSBURG** (68666)  
Anderson, C. L.  
Olsen, Richard Y.  
**SHELBY** (68662)  
Bierbower, R. L.

**SEVENTH DISTRICT**  
**CHAS. F. ASHBY, Councilor**

**SALINE**

**CRETE** (68333)  
Forney, L. W.  
Hineman, Marquis  
Larson, S. L.  
Nelson, Lyle  
Quick, Robert  
**DEWITT** (68341)  
Fowler, W. Gerald  
(Gage Co.)  
Runty, H. D. (Life)  
(Gage Co.)  
**FRIEND** (68359)  
Colon, V. Franklin  
Hamilton, F. T. (Life)  
Zimmer, Clarence

**WILBUR** (68465)  
Travnicek, F. G.

**THAYER**

**ALEXANDRIA** (68303)  
Tucker, J. Guy  
**BYRON** (68325)  
Decker, Rudolph F. (Life)  
**DESHLER** (68340)  
Reed, Paul A.  
**DAVENPORT** (68335)  
Mountford, F. A.  
**HEBRON** (68370)  
Bunting, L. G.  
Penry, R. E.

**NUCKOLLS**

**NELSON** (68961)  
Howe, Robert  
**SUPERIOR** (68978)  
Hallgrimson, Paul J.  
Kiekhaefer, Theo. D.  
Mason, C. T.  
McMahon, C. G. (Life)

**FILLMORE**

**GENEVA** (68361)  
Ashby, A. A.  
Ashby, Chas. F.  
Lynn, Vincent S.

**JEFFERSON**

**FAIRBURY** (68352)  
Cassel, R. L.  
Falloon, Frank  
Hughes, D. O.  
Johnson, Gordon O.  
Kenney, K. J.  
Luce, R. P.  
Yoachim, W. P.

**CLAY**

**SUTTON** (68979)  
Nuss, H. V.

**EIGHTH DISTRICT**  
**REX WILSON, Councilor**

**SHERIDAN**

(Northwest Nebraska)  
**GORDON** (69343)  
Wanek, Frank  
Watson, Donald

**RUSHVILLE** (69360)  
Crum, H. V.  
Hook, R. L.

**HAY SPRINGS** (69347)  
Owen, Bernard A.

**BOYD**

(Holt and Northwest)  
**LYNCH** (68746)  
Althouse, I. G.  
Becker, Wm. F.  
(In Service)  
Whitney, Mark L.

**ROCK**

(Holt and Northwest)  
**BASSETT** (68714)  
Gill, A. Dean  
Mabie, James E.  
Panzer, H. J.

**HOLT**

(Holt and Northwest)

**ATKINSON** (68713)

Ramsay, James E.  
Serbousek, Richard

**O'NEILL** (68763)

Carstens, Geo. J.  
Waters, Robert W.  
Wilson, Rex W.

**BROWN**

(Holt and Northwest)

**AINSWORTH** (69210)  
Anderson, R. C.  
Shiffermiller, Floyd

**CHERRY**

(Holt and Northwest)

**VALENTINE** (68201)  
Deakin, Thos. W.  
Farner, John E.  
Johnson, Wilbur E.

**NINTH DISTRICT**  
**H. V. SMITH, Councilor**

**HALL**

**CAIRO** (68824)  
Harb, Fred

**GRAND ISLAND** (68801)  
Adams, Leo M.  
First Natl. Bank Bldg.  
Anderson, H. C.  
217 N. Pine, Box 801  
Anderson, John S.  
1704 W. 2nd  
Bechtel, M. D.  
1806 N. Cleburn St.  
Bosley, Warren G.  
418 W. Division  
Brugh, E. A.  
323 W. Koenig  
Campbell, John F.  
702 W. Koenig  
DeMay, G. H.  
721 W. 7th

Easley, John H.  
220 Hedde Bldg.  
Filip, Alexander J.  
704 W. 1st  
Geer, Robert R.  
105 N. Eddy  
Gilloon, A. G.  
1802 N. Cleburn  
Graupner, G. W.  
217 N. Pine  
House, Robert M.  
Box 662  
Imes, Loren E.  
820 W. Division  
Koeftot, Robert R.  
706 W. 1st  
Longacre, O. E. (Life)  
Soldiers & Sailors Home  
(Butler Co.)  
Maggiore, Carl H.  
702 W. 1st  
McDermott, K. F.  
1704 W. 2nd

McGrath, Chas. Dean  
1704 W. 2nd  
McGrath, Wilmar D.  
1704 W. 2nd  
McGrath, W. M.  
First Natl. Bank Bldg.  
Mongeau, D. C.  
702 W. Koenig  
Nabity, Stanley F.  
217 N. Pine  
Profitt, J. Alfred  
704 W. Koenig  
Racines, J. Y.  
Soldiers & Sailors Home  
(Howard Co.)  
Ryder, Frank D.  
1902 W. Charles  
Sloss, Pierce J.  
1310 W. Charles  
Watson, Donald P.  
704 W. Koenig  
Watson, E. A.  
710 W. Koenig

Woodin, J. G. (Life)  
1823 N. Park  
**Woodruff, Bradley B.**  
1310 W. Charles

**BUFFALO**

**GIBBON** (68840)  
Sallenbach, Donald H.  
**KEARNEY** (68847)  
Bancroft, B. R.  
Kearney Medical Arts Bldg.  
Bauer, Lawrence Wm.  
211 W. 33rd  
Curtiss, Chas. P.  
7 W. 31st  
Hansen, H. C. (Life)  
2206 12th Ave.  
Jester, R. F. Sr. (Life)  
814 W. 23rd



Jester, Royal F., Jr.  
214 W. 25th  
Johnson, O. D.  
103 W. 22nd  
Johnson, Richard D.  
103 W. 22nd  
Johnston, Raymond F.  
3 W. 27th  
Johnston, R. S.  
3 W. 27th  
Kimball, Kenneth F.  
9 West 31st  
Lane, L. D.  
211 W. 33rd  
McCammond, John  
11 W. 31st  
Mueller, Albert  
Good Samaritan Hosp.  
Nutzman, Wm.  
State Hospital  
Nye, Dan A.  
5 W. 31st  
Peck, James  
7 W. 31st  
Richards, F. L.  
214 W. 25th  
Rosenlof, R. C.  
5 W. 31st  
Smith, Harold V.  
211 W. 33rd  
Smith, L. R.  
211 W. 33rd  
Staley, Sanford O.  
11 W. 31st  
Steffens, L. C.  
211 W. 33rd  
Stevenson, B. M.  
211 W. 33rd

Walker, Hiram  
211 W. 33rd  
(Harlan Co.)  
Ward, Vernon  
5 W. 31st  
Wilcox, M. B.  
214 W. 25th  
RAVENNA (68869)  
Carignan, Chas. B., Jr.

### CUSTER

ANSELMO (68813)  
Spivey, C. D. (Life)  
ANSLEY (68814)  
Wilcox, C. W.  
BROKEN BOW (68822)  
Blair, R. L.  
Koefoot, R. B.  
Koefoot, Theo., Jr.  
Lucas, Thomas  
CALLAWAY (68825)  
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(Buffalo Co.)

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Hranac, Chas. Eugene  
Rosenau, O. P.  
Scholz, Jack Victor  
Sitorius, Rodney A.  
GOTHENBURG (69138)  
Ayres, M. J.  
Insee, Donald O.  
Pyle, B. W.

LEXINGTON (68850)  
Finegan, John C.  
Haskins, J. R.  
Long, Wm. B.  
McGee, Dean  
Norall, V. D.  
Olsson, P. Bryant  
Watson, E. A.  
Wycoff, Ray S.

### HOOKE

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Blattspieler, S. F.  
Colorado Springs, Colo.  
Saults, Chas. F.  
(Box Butte Co.)

### HOWARD

ST. PAUL (68873)  
Hanisch, E. C.  
Hanisch, Richard  
Hanisch, Robert  
Mathews, M. D.

### VALLEY

(Four County)

### NORTH LOUP (68859)

Markley, M. E.

### ORD (68862)

Martin, Paul R.  
Miller, Otis W.  
Rogers, James  
Klamath Falls, Ore.  
Zlomke, Wayne

### GARFIELD

(Four County)

### BURWELL (68823)

Cram, Roy S.  
Meckel, Ben R.

### SHERMAN

### LOUP CITY (68853)

Amick, Carl G. (Life)  
(Custer Co.)  
Bogle, John H.  
(Four County)  
Jardon, O. Max  
(Four County)

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Anderson, H. F.  
419 N. Burlington Ave.  
Charlton, George Paul  
12th St. & Baltimore Ave.  
Dean, Earl J.  
708 Eastside Blvd.  
DeBacker, L. J. (Life)  
201 Gaston Bldg.  
Foote, C. M.  
422 N. Hastings Ave.  
Foote, D. B.  
422 N. Hastings Ave.  
Foote, E. C. (Life)  
422 N. Hastings Ave.  
Glenn, Elmer E.  
620 N. Denver Ave.  
Guildner, C. W.  
131 N. Hastings Ave.  
Hoffmeister, George F.  
418 N. Hastings Ave.  
Holcomb, Gerald R.  
1018 N. Burlington  
Kingsley, D. W., Sr.  
105 Foote Bldg.  
Kingsley, D. W., Jr.  
422 N. Hastings  
Kleager, Clyde L.  
620 N. Denver  
Kostal, O. A.  
618 N. Denver, Box 174  
Kuehn, Gerald A.  
12th St. & Baltimore Ave.  
Landgraf, Chas. W., Jr.  
605 N. Denver Ave.  
Mastin, Robert L.  
Rt. 2, Hastings  
McIntire, Robert H.  
612 W. 6th  
McIntire, Russell  
715 N. St. Joseph  
McMillan, John A.  
Box 67  
McNeill, L. S.  
605 N. Denver  
Murray, Don E.  
604 W. 6th  
Pinney, George L.  
418 N. Hastings  
Richard, Warren E.  
715 N. St. Joseph  
Rutt, Fred J.  
704 Eastside Blvd.  
Shaw, W. L. (Life)  
Reseda, Calif.  
Shreck, H. W.  
422 N. Hastings Ave.  
Smith, Robert C.  
Box 276

Wagner, Loyd  
Mary Lanning Hospital  
Weber, C. R.  
612 W. 6th  
Weiler, Leo  
204 Foote Bldg.  
Welch, Geo. L.  
12th St. & Baltimore Ave.  
Yost, John G.  
608 W. 6th

#### INGLESIDE (68953)

Anderson, A. W.  
Gouldman, Carl  
Box 240  
Kadel, M. A.  
Kleinschmidt, G. W.  
Box 232  
(Lancaster Co.)  
Lunde, F.  
Auburn, Calif.  
McDaniel, V. S.  
Box 148  
O'Donnel, H. J.

### FRANKLIN

#### FRANKLIN (68939)

Doering, William  
Thomas, Conrad

### HARLAN

#### ALMA (68920)

Long, James S.  
Simic, Wm. J.

#### ORLEANS (68966)

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Rider, E. E. (Life)  
(Lancaster Co.)

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Kamm, Frank  
(Adams Co.)

#### RED CLOUD (68970)

Bennett, Wilbur Keith  
(Adams Co.)  
Obert, Francis  
(Adams Co.)

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(Southwest Nebraska)

#### McCOOK (69001)

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310 W. 7th  
Carson, James S.  
310 W. 7th  
(Polk Co.)  
Dickinson, L. E., Jr.  
114 E. "C" St.  
Donaldson, J. H., Jr.  
602-604 Norris Ave.  
Jones, R. T. (Life)  
217 Norris Ave.  
Karrer, F. M.  
1301 Norris Ave.  
Kuxhausen, Donald  
Dallas, Texas  
Leininger, E. F.  
114 W. "C" St.  
Mason, Roger Dale  
305 E. 1st  
Morgan, D. H., Sr. (Life)  
305 E. 1st, Box 491  
Morgan, Donald H., Jr.  
305 E. 1st, Box 491  
Shank, F. W.  
310 W. 7th

### DUNDY

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Stout, Kenneth C.

### CHASE

(Southwest Nebraska)

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Mesa, Ariz.  
Shopp, Bryce G.  
Yaw, Elwood

#### WAUNETA (69045)

Carlson, C. R.

### HITCHCOCK

(Southwest Nebraska)

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Harris, Jack T.  
Mabeus, Duane F.

### FRONTIER

(Southwest Nebraska)

#### CURTIS (69025)

Magill, Van H.

### FURNS

(Southwest Nebraska)

#### ARAPAHOE (68922)

Francis, Gordon

#### CAMBRIDGE (69022)

Minnick, Clarence  
Morgan, Roland R.

#### OXFORD (68967)

Bentley, Neil B.

### KEARNEY

#### MINDEN (68959)

Butler, Robert E.  
(Buffalo Co.)

Chappel, E. R.  
(Buffalo Co.)

Finkner, John R.  
(Adams Co.)

Prince, Donald F.  
(Adams Co.)

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#### HOLDREGE (68949)

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Bivens, Wm. S.  
Brewster, Donald E.  
Brewster, F. W.  
Jones, Donald W.  
McConahay, H. A.  
Nicholson, Ralph  
Peterson, Theo. A.  
Prems, Evald  
Reiner, Walter M

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112 N. Dewey  
Claussen, Bruce F.  
321 E. "B" St.  
Cooper, George  
501 S. Jeffers  
DeVol, R. A.  
300 S. Dewey, Box 738  
Getty, Robert F.  
501 S. Jeffers  
Heider, C. F., Sr.  
501 S. Jeffers  
Heider, C. F., Jr.  
501 S. Jeffers  
Hoyt, Melvin S.  
20 So. Carr  
Kreymborg, O. C.  
Box 669

Larson, D. L.  
719 S. Dewey  
Niehus, Wm. B.  
402 S. Jeffers  
Pinkerton, Clifford C.  
402 S. Jeffers  
Raines, Max M.  
115 E. "E" St.  
Redfield, J. B. (Life)  
508 N. Dewey  
Sawyers, Gordon  
715 S. Jeffers  
Shaughnessy, E. J.  
1111 W. 4th  
Stevenson, Edward  
108 S. Vine  
Sturdevant, Clinton E.  
Evans Bldg.  
Takenaga, R. T.  
112 E. "C" St.  
Taylor, Bernie D.  
1214 West "A" St.

Walker, H. H. (Life)  
Loma Linda, Calif.  
Waltemath, G. F.  
1214 W. "A" St.  
Wisman, Jack  
715 S. Jeffers  
Ziegler, Robert G.  
1111 W. 4th

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(Cheyenne, Kimball  
and Deuel)

CHAPPELL (69129)  
Hartsaw, John E.

#### GARDEN

(Garden-Keith-Perkins)

OSHKOSH (69154)  
Albee, A. B.  
Rounsborg, Harold  
Seng, W. G.

#### KEITH

(Garden-Keith-Perkins)

##### OGALLALA (69153)

Bottom, Paul  
Burwell, J. R.  
Chase, Robert C.  
Eberle, Donald  
Harvey, E. A. (Life)  
New Plymouth, Idaho  
Spencer, Berl

#### PERKINS

(Garden Keith-Perkins)

##### GRANT (69140)

Colglazier, E. E.  
Marples, Donald  
Potts, L. C.

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Barnwell, Robert B.  
900 "N" St.  
Fuhrman, Jerry  
900 "N" St.  
Gentry, Harold E., Jr.  
1720 10th  
Gentry, W. J.  
1720 10th  
Gentry, W. Max  
1720 10th  
Harvey, W. C., Sr.  
1955 10th  
Harvey, W. C., Jr.  
1955 10th  
Wiley, Stuart Paul  
900 "N" St.

##### MITCHELL (69357)

Hoagland, Robert A.  
Loeffel, Edwin J.  
Ohme, Kenneth

##### MORRILL (69358)

Prentice, O. D.

##### SCOTTSBLUFF (69361)

Baker, Ellis E.  
1624 Ave. "A"  
Baker, Paul Q.  
1624 Ave. "A"  
Brown, W. O.  
1801 Broadway  
Campbell, Stuart D.  
3639 Ave. "B"  
Elliott, Helen E.  
2805 6th Ave.  
Floyd, John L.  
St. Mary Hosp.  
Frank, Carl L.  
1624 Ave. "A"

Gridley, L. J.  
214-16 W. 27th  
Hanna, Joe T.  
1926 Ave. "A"  
Hatch, Francis  
St. Marys Hosp.  
Hayhurst, J. D.  
218 W. 27th  
Heinke, John P.  
1723 Ave. "A"  
Herhahn, Frank T.  
2122 Broadway  
Holmes, Wm. E.  
1926 Ave. "A"  
Karrer, R. W.  
1810 1st Ave.  
Kreig, Jacob, Jr.  
2122 Broadway  
Landers, Allan C.  
3639 Ave. "B," Box 630  
Oba, Calvin M.  
116 W. 17th  
Riddell, Ted E.  
15 E. 18th  
Rizkalla, Sam  
218 W. 27th  
Rosenau, John A.  
2106 1st Ave.  
Schmitz, Gerhard  
118 W. 18th  
Schutzer, Ulysses  
2805 6th Ave.  
Sorensen, C. N.  
1801 Broadway

#### BOX BUTTE

##### ALLIANCE (69301)

Burnham, A. G.  
524 Box Butte Ave.  
Fitzgerald, Thos. D.  
202 W. 3rd

Gardner, Joseph H.  
202 W. 3rd  
Kennedy, J. F.  
916 W. 10th  
Kuncl, Joseph (Life)  
1012 Laramie Ave.  
McNulty, Edward  
916 W. 10th  
Morgan, R. J.  
916 W. 10th  
Olson, Raymond H.  
524 Box Butte Ave.  
Seng, O. L.  
619 Box Butte, Box 150  
Shannon, Dewitt D.  
916 W. 10th  
Sugang, F. P.  
515 Niobrara Ave.  
Wilkinson, Donald E.  
524 Box Butte Ave.

##### HEMINGFORD (69348)

Ruffing, John J.

#### DAWES

(Northwest Nebraska)

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Alderman, Allen J.  
Courshon, A. J. (Life)  
DeFlon, Eric G.  
Griot, A. J. (Life)  
Hoebet, L. H.  
Penor, Robert  
Rasmussen, Robert  
Serbousek, Stanley

##### CRAWFORD (69339)

Bishop, Ben

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and Deuel)

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Pankau, J. B.

##### SIDNEY (69162)

Bitner, C. U.  
Cook, Hull  
Cornelius, C. J., Jr.  
Dorwart, Clinton B.  
O'Holleran, Lloyd S.  
Rathbun, S. R.  
Thayer, James E.

#### KIMBALL

(Cheyenne, Kimball  
and Deuel)

##### KIMBALL (69145)

Calkins, Robert C.  
Core, Edwin R.  
Shamberg, Alfred H.

#### MORRILL

##### BAYARD (69334)

Hrnicsek, Leo A.  
(Scotts Bluff Co.)

##### BRIDGEPORT (69336)

Blackstone, H. A.  
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Post, George Peter  
(Scotts Bluff Co.)

# TUBERCULOSIS ABSTRACTS

## DIAGNOSIS AND TREATMENT OF BACTERIAL PNEUMONIAS

Despite antimicrobials effective against almost all pulmonary pathogens, bacterial pneumonia has a high morbidity and mortality. Complications and problems of treatment are discussed.

Infections of the lung have come to be considered examples of diseases conquered by chemotherapy. There is no doubt that antibiotics have exerted a dramatic effect on the course and outcome of bacterial pneumonias, but this group of diseases continues to rank high as a major cause of morbidity and death. This is related in part to the changing ecology of these infections which were formerly common among young relatively healthy individuals, but are now found primarily among aged, debilitated patients with chronic disease.

Furthermore, antibiotics themselves contributed to the change in the clinical picture of pneumonia and have created problems in their use. Some of the features which have come to life regarding the diagnosis, course, and treatment of bacterial pneumonias are the following:

(1) The etiologic agent frequently is missed on Gram smears of sputum; (2) the appropriate organism is not suspected; (3) there is delay in recognizing superinfection; (4) the systemic complications, particularly meningitis, are overlooked; (5) antibiotics are not properly used; (6) alterations in flora of the sputum in patients receiving antibiotics are not appreciated; and (7) the propensity of nonbacterial complications of pneumonia to produce fever is not well known. These problems will be discussed.

### STAPHYLOCOCCAL PNEUMONIA

Staphylococcal pneumonia may occur under a variety of circumstances such as a sequel to viral influenza, a manifestation of hematogenous staphylococcal disease, and a complication of structural disease of the lung.

Pneumonia associated with influenza occurs in individuals of all age groups, but patients with pregnancy, valvular heart disease, and chronic lung disease appear to be particularly prone to development of this fulminating infection. The clinical picture is abrupt in onset, progresses rapidly with marked dyspnea, cyanosis, scant and bloody sputum, and evidence of alveolar-capillary block. The virus may be more important than the staphylococcus, but treatment with penicillin-resistant penicillins is imperative.

Hematogenously disseminated staphylococcal infection has been noted frequently among narcotic addicts with septic thrombophlebitis. Patients suspected of having staphylococcal disease should be treated with penicillinase-resistant penicillins until treated with penicillinase-resistant penicillins until results of cultures and sensitivities are available. If the organism is sensitive to penicillin G, therapy should be changed to this drug.

Certain X-ray findings should raise the suspicion of staphylococcal disease. These include the development of pneumatoceles, the occurrence of

spontaneous pneumothorax; rapidly changing infiltrate with parafocal emphysema; and early loculation of pleural exudate. These manifestations of staphylococcal pneumonia are becoming increasingly common in infants and young children with mucoviscidosis, postoperative states, and superinfections after broad-spectrum antibiotic therapy. Early diagnosis of staphylococcal pneumonia, followed by appropriate drug therapy, may avert mortality.

### GRAM-NEGATIVE PNEUMONIAS

The incidence and severity of infections due to gram-negative pathogens other than the staphylococcus appear to be increasing, particularly in hospitalized patients whose normal bronchial flora is altered by antibiotics. Furthermore, the use of antibiotics per se may have increased the prevalence of these bacteria in the hospital. These pathogens are usually seen as superinfections but may produce primary pneumonia. The organisms include *Hemophilus influenza*, *Escherichia coli*, *Klebsiella-Aerobacter*, *Proteus*, and *Pseudomonas*.

*H. influenza* is frequently found in the sputum of patients with chronic lung disease and may be of etiologic significance in patients with chronic bronchitis. The relative rarity of acute *H. influenza* respiratory infections in adults does not warrant disregarding this organism as a pathogen, particularly in patients who develop acute infections against a background of chronic bronchitis, pulmonary emphysema, and bronchiectasis. Infections due to *H. influenza* call for treatment with tetracycline.

Friedlander's pneumonia occurs most commonly in alcoholics, diabetics, and patients with other debilitating disease. Early recognition is essential if therapy is to be effective.

In alcoholic patients, there are similarities between Friedlander's pneumonia and pneumococcal pneumonia. Cavitory disease has been probably more common in pneumococcal infection than has been supposed. Alcoholic patients with pneumococcal pneumonia and cavitory disease also often have bacteremia, shock, and leukopenia, and their prognosis is poor. Early recognition followed by prompt therapy is essential.

Sterile pleural effusions are a more frequent complication of pneumococcal pneumonia than true empyema. They may be associated with fever that is not affected by further antimicrobial therapy, suggesting that inflammation rather than the presence of bacteria is the most important determinant in the genesis of fever. Sterile effusions usually resolve without therapy. Drainage through a large lumen catheter may be indicated.

Some metastatic manifestations of pneumococcal pneumonia may be life-threatening despite very minimal pulmonary infection. There is the classical triad of pneumococcal meningitis, endocarditis, and pneumonia. Despite adequate antimicrobial therapy, the patient may be left a "cardiac cripple."

### COMPLICATING CONDITIONS

In some patients with slow resolution of bacterial pneumonia the infection fails to clear within four weeks. When patients over 40 have slowly resolving lobar consolidation and indolent rather than



acute symptoms, surgical intervention should be considered.

Occasionally, but rarely, patients with acute respiratory disease have carcinoma and sometimes patients with low-grade pulmonary symptoms suspected of having tumors may have only pneumonia, which responds readily to antimicrobials.

A variety of other local and systemic conditions predispose to bacterial infection in the lung. Among the local factors are trauma, bronchostenosis, foreign body, aspiration, bronchiectasis, and cystic disease of the lung. Systemic diseases complicated by recurrent pulmonary infections include multiple myeloma, chronic lymphatic leukemia, agammaglobulinemia and hypogammaglobulinemia, the nephrotic syndrome, collagen vascular disease, splenectomy in children, and perhaps such a generalized disease as alcoholism.

—Jonas A. Shulman, MD; Leon A. Phillips, MD, and Robert G. Petersdorf, MD, *Annals of Internal Medicine*, January, 1965.

### RHEUMATOID LUNG DISEASE

Among a large series of cases of rheumatoid arthritis, nine patients had diffuse pulmonary fibrosis. Pleuritis was the most common pulmonary lesion and dyspnea on exertion was an early clinical feature. Clubbing of the fingers and subcutaneous nodules were frequent, too.

Rheumatoid arthritis is a systemic disease characterized by pain and disability in peripheral joints. The disease may affect any organ but exhibits a strong preference for tissues abundant in mucopolysaccharide such as the joints and other serous surfaces, the eye, and the arteries.

The most typical histologic lesion is the necrobiotic granuloma. This histologic lesion is not completely specific, but is usually considered diagnostic of rheumatoid arthritis if the clinical manifestations of the illness are present.

An association observed between rheumatoid arthritis and lung disease has given rise to the term rheumatoid lung disease, but there is no well-defined concept of the relationship. The present study was undertaken to clarify this relationship.

### NINE CASES STUDIED

Hospital records were reviewed of 702 patients diagnosed as having rheumatoid arthritis between 1950 and 1963 at the University of Arkansas Medical Center and Little Rock Consolidated Veterans Administration Hospital.

Patients were included in the study only if the roentgenogram showed moderate or severe diffuse pulmonary fibrosis. Of the 702 rheumatoid arthritis patients, diffuse fibrosis appeared in eight. A case from another hospital was added, to make nine in all. Subcutaneous nodules occurred in six of the patients, usually about the elbows and wrists.

Arthritis usually preceded the development of the pulmonary lesion. The interval between onset of arthritis and onset of pulmonary lesions ranged from 2 to 10 years in five patients. As for the other patients, respiratory symptoms were not

present in two at the time chest abnormalities were discovered, and one patient developed pulmonary symptoms eight years prior to the onset of arthritis. There was no correlation between the severity of arthritis and the severity of pulmonary fibrosis. Four of the patients had severe crippling deformity of peripheral joints, two had moderate deformity, and three had mild deformities limited to the joints of the hands and wrists.

On the basis of chest roentgenograms, the fibrotic lesions in the lungs remained constant or increased in severity in all patients. There was no evidence that the infiltrative lesions ever regressed or that therapy altered the course of the pulmonary disease.

Results of pulmonary function studies were typical of cases of diffuse pulmonary fibrosis. The vital capacity was reduced; expiratory flow rates were normal.

The most common pulmonary lesion is pleuritis. It may occur without symptoms or be accompanied by pain in the chest. Although it often passes unnoticed, pleural effusion is frequently associated with pleuritis and may be detected if roentgenographic examination of the chest is done at the proper time. The episodes of pleuritis tend to be mild and transient, although they may be severe, but in either event the result is fibrosis. Post-mortem examinations often reveal dense pleural adhesions consisting of fibrous tissue without specific changes. The pleura, however, may contain typical rheumatoid granulomas with a central zone of fibrinoid necrosis surrounded by a fibrous layer of palisading connective-tissue cells and scattered mononuclear cells.

### HISTOLOGIC CHANGES

Interstitial pneumonitis tends to appear diffusely throughout the lung but may occur only in localized areas about the bronchi and blood vessels. The initial histologic event is dense lymphocytic infiltration with edema and thickening of the interalveolar septa. Lymphocytic foci resembling germinal follicles may be prominent, and the alveolar epithelium may be cuboidal. There is usually no intraalveolar exudate.

The clinical features in pulmonary fibrosis include the early appearance of dyspnea on exertion. Recurrent bronchitis with cough and sputum production and clubbing of the fingers are both common. Subcutaneous nodules are especially frequent, fine crackling rales are often heard and cor pulmonale sometimes develops. Any degree of joint disability may occur. Total lung capacity is decreased because diffuse thickening of the alveolar walls alters the elastic properties of the lung. The resistance to expiratory air flow is usually normal but may be increased if the patient develops bronchitis or honeycomb lung. Otherwise, the physiological features are those of any sort of impaired diffusion or defective gas transfer.

Two types of pulmonary fibrosis occur in patients with rheumatoid disease — diffusely nodular and coarsely nodular. Necrobiotic granulomas are more common in coarsely nodular fibrosis but may occur in diffuse fibrosis as well. Not only do histologically typical rheumatoid granulomas appear deep in the lung parenchyma, but lymphocytic foci with dividing lymphoblasts occur which simulate germinal follicles. These findings are helpful in

the differentiation of rheumatoid disease from other types of diffuse pulmonary fibrosis.

The central issue is whether the rheumatoid process results in lung disease in the absence of other pathogenic stimuli or the pathologic changes occur because the lung tissue is more reactive than usual.

The clinical course of patients with coarsely nodular pulmonary fibrosis is determined by the extent of the involved lung tissue. With extensive involvement the illness may be fatal, but in general it tends to be clinically less severe than diffuse fibrosis.

Rheumatoid lung disease encompasses a wide range of pathologic alterations, varying from insignificant fibrous pleural adhesions to progressive and fatal diffuse fibrosis. The high frequency of lung disease in rheumatoid patients suggests that the rheumatoid process is essential or at least important to its cause. But the lack of correlation between the intensity of the arthritis and the severity of the lung disease suggests that the rheumatoid process alone is not responsible for the lung involvement.

The exceptional reactivity of the lung tissue in patients with rheumatoid disease makes it seem reasonable to propose that ordinary pathogenic stimuli, particularly viral and bacterial infections, may provoke an intense response and, ultimately, severe lung pathology in the rheumatoid patient.

—C. Dowell Patterson, MD; William E. Harville, MD, and John A. Pierce, MD: *Annals of Internal Medicine*, April, 1965.

**Microscopic Studies of Nasal Secretions in Infectious Asthma** — M. Green and D. Solomon, *Ann Allergy* 20:373 (June) 1962.

A cytological and bacteriological technique for differentiating immunologically non-responsive infectious asthma from other types of asthma is presented, and a method of predicting the onset of infectious asthma in the nonresponsive group is reviewed. In the immunologically nonresponsive group of children, as defined by the author, an attack of asthma could often be predicted two days prior to the onset. Asthma followed an invasion of the nasal secretions by visible bacteria with partial failure of the immunological processes. The bacteriological and cytological events in this group followed a predictable course as the attack waned. Some of the factors necessary to encourage phagocytosis, agglutination, and lysis of bacteria are present in human gamma globulin.

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